



PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants : Jennifer L. Mitcham et al.
Application No. : 09/636,801
Filed : August 10, 2000
For : COMPOSITIONS AND METHODS FOR THERAPY AND
DIAGNOSIS OF OVARIAN CANCER

#13
Plunkett
1/5/0

TECH CENTER 1600/2900

DEC 27 2001

RECEIVED

Examiner : Mary K. Zeman
Art Unit : 1631
Docket No. : 210121.462C4
Date : December 17, 2001

Official Draftsperson
Commissioner for Patents
Washington, DC 20231

FILING FORMAL DRAWINGS

Commissioner for Patents:

Enclosed are 101 sheets of formal drawings, Figures 1A-25, for filing in the above-identified application.

Respectfully submitted,

Seed Intellectual Property Law Group PLLC

Jeffrey Hundley
Registration No. 42,676

Enclosures:

Formal Drawings (101 sheets, Figs. 1A-25)

701 Fifth Avenue, Suite 6300
Seattle, Washington 98104-7092
Phone: (206) 622-4900 X 393
Fax: (206) 682-6031

D:\NrPortbl\iManage\JUDYD\242842_1.DOCF:\Pat\p7-14.doc

11729.1 contg

TTAGAGAGGCACAGAAGGAAGAAGAGTTAAAAGCAGCAAAGCCGGGTTTTTTTTGTTTTGTTTTGTTTTGTTTTGTT
TTGAGATGGAGTCTCACTCTGTTGCCAAGCTGGAGTACAACGGCATGATCTCAGCTCGCTGCAACCTCCGCCTCC
CACGTTCAAGTGATTCTCCTGCCTCAGCCTCCCAAGTAGCTGGGATTACAGGCGCCCGCCACCACGCTCAGCTAAT
TTTTTTGTATTTTAGTAGAGACAGGGTTTACCAGGTTGGCCAGGCTGCTCTTGAACCTCTGACCTCAGGTGAT
CCACCCGCCTCGGCCTCCCAAAGTGCTGGGATTACAGGCGTGAGCCACCACGCGCCGCCCAAGCTGTTTCTTT
TGTCTTTAGCGTAAAGCTCTCCTGCCATGCAGTATCTACATAACTGACGTGACTGCCAGCAAGCTCAGTCACTCCG
TGGTC

11729-45.21.21.cons1

TAGGATGTGTTGGACCCTCTGTGTCAAAAAAACCTCACAAAGAATCCCCTGCTCATTACAGAAGAAGATGCATTT
AAAATATGGGTTATTTTCAACTTTTTATCTGAGGACAAGTATCCATTAAATTATTGTGTGAGAAGAGATTGAATACC
TGCTTAAGAAGCTTACAGAAGCTATGGGAGGAGGTTGGCAGCAAGAACAATTTGAACATTATAAAATCAACTTTGA
TGACAGTAAAAATGGCCTTTCTGCATGGGAACCTATTGAGCTTATTGGAAATGGACAGTTTAGCAAAGGCATGGAC
CGGCAGACTGTGTCTATGGCAATTAATGAAGTCTTTAATGAACCTATATTAGATGTGTTAAAGCAGGGTTACATGA
TGAAAAAGGGCCACAGACGGAAAACTGGACTGAAAGATGGTTTGTAATAAACCAACATAATTTCTTACTATGT
GAGTGAGGATCTGAAGGATAAGAAAGGAGACATTCTCTGGATGAAAATTGCTGTGTAGAGTCCTTGCCTGACAAA
GATGGAAA

11729-45.21.21.cons2

TTAGAGAGGCACAGAAGGAAGAAGAGTTAAAAGCAGCAAAGCCGGGTTTTTTTTGTTTTGTTTTGTTTTGTTTTGTT
TTGAGATGGAGTCTCACTCTGTTGCCAAGCTGGAGTACAACGGCATGATCTCAGCTCGCTGCAACCTCCGCCTCC
CACGTTCAAGTGATTCTCCTGCCTCAGCCTCCCAAGTAGCTGGGATTACAGGCGCCCGCCACCACGCTCAGCTAAT
TTTTTTGTATTTTAGTAGAGACAGGGTTTACCAGGTTGGCCAGGCTGCTCTTGAACCTCTGACCTCAGGTGAT
CCACCCGCCTCGGCCTCCCAAAGTGCTGGGATTACAGGCGTGAGCCACCACGCGCGCCCAAGCTGTTTCTTT
TGTCTTTAGCGTAAAGCTCTCCTGCCATGCAGTATCTACATAACTGACGTGACTGCCAGCAAGCTCAGTCACTCCG
TGGTC

11731.1contig

TCTTTTCTTTGATTTTCTTCAATTTGTACGTTTGATTTTATGAAGTTGTTCAAGGGCTAACTGCTGTGTATTA
TAGCTTTCTCTGAGTTTCTTCACTGATTGTTAAATGAATCCATTTCTGAGAGCTTAGATGCAGTTTCTTTTCAA
GAGCATCTAATTGTTCTTTAAGTCTTTGGCATAATTCTTCTTTCTGATGACTTTTATGAAGTAACTGATCCC
TGAATCAGGTGTGTTACTGAGCTGCATGTTTTAATTCTTTCTGTTAATAGCTGCTTCTCAGGGACCAGATAGATA
AGCTTATTTGATATTCCTTAAGCTCTTGTTGAAGTTGTTGATTTCCATAATTTCCAGGTCACTGTTTATCCA
AACTTCTAGCTCAGTCTTTTGTGTTTGCTTTCTGATTTGGACATCTTGTAGTCTGCCTGAGATCTGCTGATGXTT
TCCATTCAGTCTTCCAGTTCAGGTGGAGACTTTXCTTCTGGAGCTCAGCCTGACAATGCCTTCTTGXTCCCT

11731.2contig

AGCCAGATGGCTGAGAGCTGCAAGAAGAAGTCAGGATCATGATGGCTCAGTTTCCCACAGCGATGAATGGAGGGCC
AAATATGTGGGCTATTACATCTGAAGAACGTACTAAGCATGATAAACAGTTTGATAACCTCAAACCTTCAGGAGGT
TACATAACAGGTGATCAAGCCCGTACTTTTTTCTACAGTCAGGTCTGCCGGCCCCGGTTTTAGCTGAAATATGGG
CCTTATCAGATCTGAACAAGGATGGGAAGATGGACCAGCAAGAGTTCTCTATAGCTATGAACTCATCAAGTTAAA
GTTGCAGGGCCAACAGCTGCCTGTAGTCCTCCCTCCTATCATGAAACAACCCCTATGTTCTCTCCACTAATCTCT
GCTCGTTTTGGGATGGGAAGCATGCCAATCTGTCCATTATCAGCCATTGCCTCCAGTTGCACCTATAGCAACAC
CCTTGCTTCTGCTACTTCAGGGACCAGTATTCCTCCCTAATGATGCCTGCTCCCCTAGTGCCTTCTGTTAGTA

11734.1contig

AATAGATTTAATGCAGAGTGTCAACTTCAATTGATTGATAGTGGCTGCCTAGAGTGCTGTGTTGAGTAGGTTTCTG
AGGATGCACCCTGGCTTGAAGAGAAAGACTGGCAGGATTAACAATATCTAAAATCTCACTTGTAGGAGAAACCACA
GGCACCAGAGCTGCCACTGGTGTGGCACCAGCTCCACCAAGGCCAGCGAAGAGCCCAAATGTGAGAGTGGCGGTC
AGGCTGGCACCAGCACTGAAGCCACCCTGGTGTGGCACTGGCACTGGCACTGTTATTGGTACTGGTACTGGCAC
CAGTGTGGCACTGCCACTCTCTTGGGCTTTGGCTTTAGCTTCTGCTCCCGCTGGATCCGGGCTTTGGCCAGGG
TCCGATATCAGCTTCGTCCAGTTGCAGGGCCCGGCAGCATTCTCGAGCCGAGCCCAATGCCCATTCGAGCTCTA
ATCTCGGCCCTAGCCTTGGCTTCAGCTGCAGCCTCAGCTGCAGCCTTCAAATCCGCTTCCATCGCCTCTCGGTAC

11734.2contig

GCCAAGAAAGCCCGAAAGGTGAAGCATCTGGATGGGGAAGAGGATGGCAGCAGTGATCAGAGTCAGGCTTCTGGAA
CCACAGGTGGCCGAAGGGTCTCAAAGGCCCTAATGGCCTCAATGGCCCGCAGGGCTTCAAGGGGTCCCATAGCCTT
TTGGGCCCCGAGGGCATCAAGGACTCGGTTGGCTGCTTGGGCCCCGAGAGCCTTGCTCTCCCTGAGATCACCTAAA
GCCCGTAGGGGCAAGGCTCGCCGTAGAGCTGCCAAGCTCCAGTCATCCCAAGAGCCTGAAGCACCACCACCTCGGG
ATGTGGCCCTTTTGAAGGGAGGGCAAATGATTTGGTGAAGTACCTTTTGGCTAAAGACCAGACGAAGATTCCCAT
CAAGCGCTCGGACATGCTGAAGGACATCATCAAAGAATACACTGATGTGTACCCGAAATCATTGAACGAGCAGGC
TATTCCTTGGAGAAGGTATTTGGGATTCAATTGAAGGAAATTGATAAGAATGACCACTTGACATTCTTCTCAGC

11736.1contg

GAGGTCTCACTATGTTGCCAGGCTGTTCTTGAACCTCTGGGATCAAGCAATCCACCCATGTTGGTCTCCAAAAGT
GCTGGGATCATAGGCGTGAGCCACCTCACCCAGCCACCAATTTTCAATCAGGAAGACTTTTTCTTCTTCAAGAAG
TGAAGGGTTTTCCAGAGTATAGCTACACTATTGCTTGCCTGAGGGTGACTACAAAATTGCTTGCTAAAAGGTTAGGA
TGGGTAAAGAATTAGATTTTCTGAATGCAAAAATAAAATGTGAACATAATGAACTTTAGGTAATACATATTCATAAA
ATAATTATTCACATATTTCTGATTTATCACAGAAATAATGTATGAAATGCTTTGAGTTTCTTGGAGTAAACTCCA
TTACTCATCCCAAGAAACCATATTATAAGTATCACTGATAATAAGAACAACAGGACCTTGTCAATAATTCTGGATA
AGAGAAATAGTCTCTGGGTGTTTGXTCTTAATTGATAAAATTTACTTGTCCATCTTTTAGTTTCAAGATCACAAAA

Fig. 1B

11736.2contig

AAGCGGAAATGAGAAAGGAGGGGAAAATCATGTGGTATTGAGCGGAAAACCTGCTGGATGACAGGGCTCAGTCCTGTT
GGAGAACTCTGGGTGGTGTCTGTAGAACAGGGCCACTCACAGTGGGGTGCACAGACCAGCACGGCTCTGTGACCTGT
TTGTTACAGGTCCATGATGAGGTAAACAATACTGAGTATAAGGGTTGGTTTAGAACTCTTACAGCAATTTGAC
AAAGTAATCTTCTGTGCAGTGAATCTAAGAAAAAATTGGGGCTGTATTTGTATGTTCTTTTTTTCATTTTCATGT
TCTGAGTTACCTATTTTTATTGCATTTTACAAAAGCATCCTTCCATGAAGGACCGGAAGTTAAAAACAAAGCAGGT
CCTTTATCACAGCACTGTGCTAGAACACAGTTCAGAGTTATCCACCCAAGGAGCCAGGGAGCTGGGCTAAACCAAA
GAATTTTGCTTTTGGTTAATCATCAGTACTTGAGTTGGAATTGTTTTAATCCCATCATTACCAGGCTGGAXGTG

11739-1&2

CCGCGGCTCCTGTCCAGACCCTGACCCTCCCTCCCAAGGCTCAACCGTCCCCAACAACCGCCAGCCTTGTACTGA
TGTGGGCTGCGAGAGCCTGTGCTTAAGTAAGAATCAGGCCTTATTGGAGACATTCAAGCAAAGGTTGGACAACCTAC
TTTTCCAGAACAGAAAGGAACTCATGCATCAGAAAAGGTGACTAATAAAGGTACCAGAAGAATATGGCTGCACAA
ATACCAGAATCTGATCAGATAAAACAGTTTAAGGAATTTCTGGGGACCTACAATAAACTTACAGAGACCTGCTTTT
TGGACTGTGTTAGAGACTTCACAACAAGAGAAGTAAACCTGAAGAGACCACCTGTTTCAAGACATTGCTTACAGAA
ATATTTAAAAATGACACAAAGAATATCCATGAGATTTTCAAGGAATATCATATTCAGCAGAATGAAGCCCTGGCAGCC
AAAGCAGGACTCCTTGGCCAACCACGATAGAGAAGTCCTGATGGATGAACTTTTGTGAAAGATTGCCAACAGCTG
CTTTATTGGAAATGAGGACTCATCTGATAGAATCCCCTGAAAGCAGTAGCCACCATGTTCAACCATCTGTCATGAC
TGTTTGGCAAATGGAAACCGCTGGAGAAACAAAATTGCTATTTACCAGGAATAATCACAATAGAAGGTCTTATTGT
TCAGTGAATAATAAGATGCAACATTTGTTGAGGCCTTATGATTGAGCAGCTTGGTCACTTGATTAGAAAAATAAA
CCATTGTTTCTTCAATTGTGACTGTTAATTTTAAAGCAACTTATGTGTTGATCATGTATGAGATAGAAAAATTTT
TATTACTCAAAGTAAATAAATGGA

11740.1.contig

GAAAAAAATATAAAACACACTTTTGGCGAAAACGGTGGCCCTAAAAGAGGAAAAGAATTTACCAATATAAATCCA
ATTTTATGAAAACCTGACAATTTAATCCAAGAATCACTTTTGTAAATGAAGCTAGCAAGTGATGATATGATAAAATA
AACGTGGAGGAAATAAAACACAAGACTTGGCATAAGATATATCCACTTTTGTATTTAACTTGTGAAGCATATTC
TTCGACAAATTGTGAAAGCGTTCCTGATCTTGCTTGTCTCCATTTCAAATAAGGAGGCATATCACATCCCAAGAG
TAACAGAAAAAGAAAAAGACATTTTTGCATTTTGAAGTGAACCAAGACACAAAACAAAACGAACAAAGTGTCAT
GTCTAATTCTAGCCTCTGAAATAAACCTTGAACATCTCCTACAAGGCACCGTGATTTTTGTAAATTCTAACCTGAAG
AAATGTGATGACTTTTGTGGACATGAAATCAGATGAGAAAACCTGTGGTCTTTCCAAAGCCTGAACTCCCCTGAAA
ACCTTTGCA

Fig. 1C

11766.1.contig

CTGGGATCATTTCTCTTGATGTCATAAAAGACTCTTCTTCTTCTCTTCATCCTCTTCTTCATCCTCTTCTGTACA
GTGCTGCCGGGTACAACGGCTATCTTTGTCTTTATCCTGAGATGAAGATGATGCTTCTGTTTCTCCTACCATAACT
GAAGAAATTTTCGCTGGAAGTCGTTTACTGGCTGTTTCTCTGACTTCACCTTCTTTGTCAAACCTGAGTCTTTTA
CCTCATGCCCCCTCAGCTTCCACAGCATCTTCATCTGGATGTTTATTTTCAAAGGGCTCACTGAGGAAACTTCTGA
TTCAGAGGTGGAAGAGTCACTGTGATTTTCTCCTCATTTTGTGCAAATTTGCCTCTTTGCTGTCTGTGCTCTCA
GGCAACCCATTTGTTGTATGGGGGCTGACAAAGAAACCTTTGGTCGATTAAGTGGCCTGGGTGTCCAGGCCCAT
TTATATTAGACCTCTCAGTATAGCTTGGTGAATTTCCAGGAAACATAACACCATTTCATTGATTTAAACTATTGGA
ATTGGTTTT

11766.2.contig

GAGGGTTGGTGGTAGCGGCTTGGGGAGGTGCTCGCTCTGTGGTCTTGTCTCTCGCACGCTTCCCCGGCTCCCT
TCGTTTCCCCCCCCGGTGCCTGCGTGCCGGAGTGTGTGCGAGGGAGGGGGAGGGCGTCGGGGGGGTGGGGGGAG
GCGTTCCGGTCCCCAAGAGACCCGCGGAGGGAGGCGGAGGCTGTGAGGGACTCCGGGAAGCCATGGACGTGAGAG
GCTCCAGGAGGCGCTGAAAGATTTTGAGAAGAGGGGGGAAAAAGGAAGTTTGTCTGTCTGATCAGTTTCTTTGT
CATGTAGCCAAGACTGGAGAAACAATGATTCAGTGGTCCCAATTTAAAGGCTATTTTATTTTCAAACCTGGAGAAAG
TGATGGATGATTCAGAACTTCAGCTCCTGAGCCAAGAGGTCTCCCAACCCTAATGTGCA

11773.2.contig

AAGCAGGCGGCTCCCGCGCTCGCAGGGCCGTGCCACCTGCCCGCCCGCCGCTCGCTCGCTCGCCCGCCGCGCCG
GCTGCCGACCGCCAGCATGCTGCCGAGAGTGGGCTGCCCGCGCTGCCGXTGCCG

11775-1&2

ATCTCTTGATGCCAAATATTTAATATAAATCTTTGAAACAAGTTCAGATGAAATAAAAATCAAAGTTTGCAAAAA
CGTGAAGATTAACCTAATTGTCAAATATTCCTCATTGCCCAAATCAGTATTTTTTTTATTTCTATGCAAAAGTAT
GCCTTCAAACCTGCTTAAATGATATATGATATGATACACAAACAGTTTTTCAAATAGTAAAGCCAGTCATCTTGCAA
TTGTAAGAAATAGGTAAAAGATTATAAGACACCTTACACACACACACACACACACAGTGTGCACGCCAATGAC
AAAAACAATTTGGCCTCTCCTAAAATAAGAACATGAAGACCCTTAATTGCTGCCAGGAGGGAACACTGTGTCACC
CCTCCCTACAATCCAGGTAGTTTCTTTAATCCAATAGCAAATCTGGGCATATTTGAGAGGAGTGATTCTGACAGC
CACGTTGAAATCCTGTGGGGAACCATTCATGTCCACCCACTGGTGCCCTGAAAAATGCCAATAATTTTTCGCTCC
CACTTCTGCTGCTGTCTCTTCCACATCCTCACATAGACCCAGACCCGCTGGCCCTGGCTGGGCATCGCATTGCT
GGTAGAGCAAGTCATAGGTCTCGTCTTTGACGTACAGAAGCGATACACCAAATTGCCTGGTGGTCATTGTCATA
ACCAGAGA

11777.1&2.cons

CAGACGGGGTTTCACTATGTTGGCTAGGCTGGTCTTGAACCTCTGACTTCAGGTGATCTGCCTGCCTTGGCCTCCC
AAAGTGCTGGGATTACAGGCATAAGCCACTGCGCCCGGCTGATCTGATGGTTTTATAAGGCTTTTCCCCCTTTTGC
TCAGCACTTCTCCTTCTGCGCCATGTGAAGAAGGACATGTTTGCTTCCCCTTCCACCACGATTGTAAGTTGTTT
CCTGAGGCCTCCCCGGCCATGCTGAACTGTGAGTCAATTAACCTCTTTCCTTTATAAATTATCCAGTTTTGGGTA
TGTCTTTATTAGTAGAATGAGAACAGACTAATACAACCCTTAAAGGAGACTGACGGAGAGGATTCTTCTGGATCC
CAGCACTTCTCTGAATGCTACTGACATTCTTCTTGAGGACTTTAACTGGGAGATAGAAAACAGATTCCATGGCT
CAGCAGCCTGAGAGCAGGGAGGGAGCCAAGCTATAGATGACATGGGCAGCCTCCCCTGAGGCCAGGTGTGGCCGAA
CCTGGGCAGTGCTGCACCCACCCACCAGGGCCAAGTCTGTCTTGGAGAGCCAAGCCTCAATCACTGCTAGCC
TCAAGTGTCCCCAAGCCACAGTGGCTAGGGGGACTCAGGGAACAGTTCAGTCTGCCCTACTTCTCTTACCTTTA
CCCCTCATACCTCCAAAGTAGACCATGTTTCATGAGGTCCAAAG

11779.2.contig

AAGCGAGGAAGCCACTGCGGCTCCTGGCTGAAAAGCGGGCGCCAGGCTCGGGAACAGAGGGAACGCGAAGAACAGGA
GCGGAAGCTGCAGGCTGAAAGGGACAAGCGAATGCGAGAGGAGCAGCTGGCCCGGGAGGCTGAAGCCCGGGCTGAA
CGTGAGGCCGAGGCGCGGAGACGGGAGGAGCAGGAGGCTCGAGAGAAGGCGCAGGCTGAGCAGGAGGAGCAGGAGC
GACTGCAGAAGCAGAAAGAGGAAGCCGAAGCCCGGTCCCGGGAAGAAGCTGAGCGCCAGCGCCAGGAGCGGGAAAA
GCACTTTCAGAAGGAGGAACAGGAGAGACAAGAGCGAAGAAAGCGGCTGGAGGAGATAATGAAGAGGACTCGGAAA
TCAGAAGCCGCGGAAACCAAGAAGCAGGATGCAAAGGAGACCGCAGCTAACAAATTCGGGCCAGACCTTGTGAAA
GCTGTAGAGACTCGGCCCTCTGGGCTTCAGAAAGGATTCTATTGCAGAAAGGAAGGAGCTXGGCCCCCAXGGA

11781 & 37.cons

CTCTGTGGAAAACCTGATGAGGAATGAATTTACCATTACCCATGTTCTCATCCCCAAGCAAAGTGCTGGGTCTGATT
ACTGCAACACAGAGAACGAAGAAGAACTTTTCTCATACAGGATCAGCAGGGCCTCATCACACTGGGCTGGATTCA
TACTACCCCCACACAGACCGCGTTTTCTCTCCAGTGTGACCTACACACTCACTGCTCTTACCAGATGATGTTGCCA
GAGTCAGTAGCCATTGTTTGCTCCCCAAGTTCAGGAAACTGGATTCTTTAACTAACTGACCATGGACTAGAGG
AGATTTCTTCTGTGCGCCAGAAAGGATTTTCATCCACACAGCAAGGATCCACCTCTGTTCTGTAGCTGCAGCCACGT
GACTGTTGTGGACAGAGCAGTGACCATCACAGACCTTCGATGAGCGTTTGAGTCCAACACCTTCCAAGAACAACAA
AACCATATCAGTGTACTGTAGCCCTTAATTTAAGCTTTCTAGAAAGCTTTGGAAGTTTTGTAGATAGTAGAAAG
GGGGGCATCACXTGAGAAAGAGCTGATTTTGTATTTAGGTTTTGAAAAGAAATAACTGAACATATTTTTTAGGCAA
GTCAGAAAGAGAACATGGTCACCCAAAAGCAACTGTAACCTCAGAAATTAAGTTACTCAGAAATTAAGTAGCTCAGA
AATTAAGAAAGAATGGTATAATGAACCCCATATACCTTCTCTGATTACCAATTGTTAACATTTTTTCTCT
CTCAGCTATCCTTCTAATTTCTCTCTAATTTCAATTTGTTTATATTTACCTCTGGGCTCAATAAGGGCATCTGTGC
AGAAATTTGGAAGCCATTTAGAAAATCTTTTGGATTTTCTGTGGTTTATGGCAATATGAATGGAGCTTATTACTG
GGGTGAGGGACAGCTTACTCCATTTGACCAGATTGTTTGGCTAACACATCCCGAAGAATGATTTTGTGAGGAATTA
TTGTTATTTAATAAATATTTTCAAGGATATTTTCTCTACAATAAAGTAACAAT

Fig. 1E

11781-76-87-37

CTCTGTGGAAAAGTATGAGGAATGAATTTACCATTACCCATGTTCTCATCCCCAAGCAAAGTGCTGGGTCTGATT
ACTGCAACACAGAGAACGAAGAAGAACTTTTCTCATACAGGATCAGCAGGGCCTCATCACACTGGGCTGGATTCA
TACTACCCCCACACAGACCGCGTTTCTCTCCAGTGTGACCTACACACTCACTGCTTTACCAGATGATGTTGCCA
GAGTCAGTAGCCATTGTTTGTCTCCCCAAGTTCAGGAACTGGATTCTTTAACTAACTGACCATGGACTAGAGG
AGATTTCTTCTGTGCGCCAGAAAGGATTTATCCACACAGCAAGGATCCACCTCTGTTCTGTAGCTGCAGCCACGT
GACTGTTGTGGACAGAGCAGTGACCATCACAGACCTTCGATGAGCGTTTGAGTCCAACACCTTCCAAGAACAACAA
AACCATATCAGTGTACTGTAGCCCCCTTAATTTAAGCTTTCTAGAAAGCTTTGGAAGTTTTGTAGATAGTAGAAAG
GGGGGCATCACCTGAGAAAGAGCTGATTTTGTATTTAGGTTTGAAGAAATAACTGAACATATTTTTTAGGCAA
GTCAGAAAGAGAACATGGTCACCCAAAAGCAACTGTAAGTCAAGAAATTAAGTTACTCAGAAATTAAGTAGCTCAGA
AATTAAGAAAGAATGGTATAATGAACCCCATATACCTTCTCTGGATTACCAATTGTTAACATTTTTCTCT
CTCAGCTATCCTTCTAATTTCTCTCTAATTTCAATTTGTTTATATTTACCTCTGGGCTCAATAAGGGCATCTGTGC
AGAAATTTGGAAGCCATTTAGAAAATCTTTGGATTTTCTGTGGTTTATGGCAATATGAATGGAGCTTATTACTG
GGGTGAGGGACAGCTTACTCCATTTGACCAGATTGTTTGGCTAACACATCCCGAAGAATGATTTTGTGAGGAATTA
TTGTTATTTAATAAATATTTTCTCTACAATAAAGTAACAATTA

11784-1 & 2

GGACGACAAGGCCATGGCGATATCGGATCCGAATTCAGCCTTTGGAATTAATAAACCTGGAACAGGGAAGGTGA
AAGTTGGAGTGAGATGTCTTCCATATCTATACCTTTGTGCACAGTTGAATGGGAAGTGTGGGTTTAGGGCATCT
TAGAGTTGATTGATGGAAAAAGCAGACAGGAAGTGGTGGGAGGTCAAGTGGGGAAGTTGGTGAATGTGGAATACT
TACCTTTGTGCTCCACTTAAACCAGATGTGTTGCAGCTTCTGACATGCAAGGATCTACTTTAATTCACACTCT
CATTAAATAATTGAATAAAAGGGAATGTTTTGGCACCTGATATAATCTGCCAGGCTATGTGACAGTAGGAAGGAAT
GGTTTCCCCTAACAAAGCCCAATGCACTGGTCTGACTTTATAAATTATTTAATAAAATGAAGTATTATC

11785.2.contig

GGCAGTGACATTCACCATCATGGGAACCACTTCCCTTTTCTTCAGGATTCTCTGTAGTGGAAGAGAGCACCCAGT
GTTGGGCTGAAAACATCTGAAAGTAGGGAGAAGAACCTAAAATAATCAGTATCTCAGAGGGCTCTAAGGTGCCAAG
AAGTCTCACTGGACATTTAAGTGCCAACAAAGGCATACTTTCGGAATCGCCAAGTCAAACTTTCTAACTTCTGTC
TCTCTCAGAGACAAGTGAGACTCAAGAGTCTACTGCTTTAGTGGCAACTACAGAAAAGTGGTGTACCCAGAAAAA
CAGGAGCAATTAGAAATGGTTCCAATATTTCAAAGCTCCGCAACAGGATGTGCTTTCTTTGCCCATTTAGGGTT
TCTTCTCTTCTTTCTCTTTATTAACCACT

11718-1&2 cons

TGCGCTGAAAACAACGGCCTCCTTTACTGTTAAAATGCAGCCACAGGTGCTTAGCCGTGGGCATCTCAACCACCAG
CCTCTGTGGGGGGCAGGTGGGCGTCCCTGTGGGCCTCTGGGCCCACGTCCAGCCTCTGTCTCTGCCTTCCGTTCT
TCGACAGTGTTCGCCGCATCCCTGGTCACTTGGTACTTGGCGTGGGCCTCCTGTGCTGCTCCAGCAGCTCCTCCAG
GXGGTCGGCCCCGCTTCACCGCAGCCTCATGTTGTGTCCGGAGGCTGCTCACGGCCTCCTCCTTCCTCGCGAGGGCT
GTCTTACCCTCCGGXGCACCTCCTCCAGCTCCAGCTGCTGGCGGGCCTGCAGCGTGGCCAGCTCGGCCTTGGCCT
GCCGCGTCTCCTCCTCARAGGCTGCCAGCCGGTCTCGAACTCCTGGCGGATCACCTGGGCCAGGTTGCTGCGCTC
GCTAGAAAGCTGCTCGTTACCGCCTGCGCATCCTCCAGCGCCGCTCCTTCTGCCGCACAAGGCCCTGCAGACGC
AGATTCTCGCCCTCGGCCTCCCCAAGCTGGCCCTTCAGCTCCGAGCACCGCTCCTGAAGCTTCCGCTCCGACTGCT
CCAGCTCGGAGAGCTCGGCCTCGTACTTGTCCCGTAAGCGCTTGATGCGGCTCTCGGCAGCCTTCTCACTCTCCTC
CTTGCCAGCGCCATGTGCGCCTCCAGCCGGTGAATGACCAGCTCAATCTCCTTGTCCCGGCCTTTCGGATTTCT
TCCCTCAGCTCCTGTTCCCGGTTACAGCAGCCACGCCTCCTCCTTCTGCTGCGGCCGGCCTCCACGCCTGCCTCT
CCAGCTCCAGCTGCTGCTTCAGGGTATTAGCTCCATCTGGCGGGCCTGCAGCGTGGCCA

13690.4

CAACTTATTACTTGAAATTATAATATAGCCTGTCCGTTTGCTGTTTCCAGGCTGTGATATATTTTCCTAGTGGTTT
GACTTTAAAAATAAATAAGGTTTAATTTTCTCCCC

13693.1

TGCAAGTCACGGGAGTTTATTTATTTAATTTTTTTTCCCCAGATGGAGACTCTGTGCGCCAGGCTGGAGTGCAATGG
TGTGATCTTGGCTCACTGCAACCTCCACCTCCTGGGTTCAAGCGATTCTCCTGCCACAGCCTCCCGAGTAGCTGGG
ATTACAGGTGCCCGCCACCACACCCAGCTAATTTTTATATTTTAGTAAAGACAGGGTTTCCCATGTTGGCCAGG
CTGGTCTTGAATTTCTGACCTCAGGTGATCCACCTGCCTCGGCCTCCCAAAGTGTGGGATTACAGGCGTGAGCTA
CCCGTGCTGGCCAGCCACTGGAGTTTAAAGGACAGTCATGTTGGCTCCAGCCTAAGGCGGCATTTTCCCCATCA
GAAAGCCCGCGGCTCCTGTACCTCAAATAGGGCACCTGTAAAGTCAGTCAGTGAAGTCTCTGCTCTAACTGGCCA
CCCGGGGCCATTGGCNTCTGACACAGCCTTGCCAGGANGCCTGCATCTGCAAAAGAAAAGTTCACTTCCTTTCCG

13694.1

CAGAGAATCTKAGAAAGATGTCGCGTTTTCTTTTAAATGAATGAGAGAAGCCCATTTGTATCCCTGAATCATTGAGA
AAAGGCGGCGGTGGCGACAGCGGCGACCTAGGGATCGATCTGGAGGGACTTGGGGAGCGTGCAGAGACCTCTAGCT
CGAGCGGAGGGACCTCCCGCCGGGATGCCTGGGGAGCAGATGGACCCTACTGGAAGTCAGTTGGATTAGATTTCT
TCTCAGCAAGATACTCCTTGCCTGATAATTGAAGATTCTCAGCCTGAAAGCCAGGTTCTAGAGGATGATTCTGGTT
CTCACTTCAGTATGCTATCTCGACACCTTCTAATCTCCAGACGCACAAAGAAAATCCTGTGTTGGATGTTGNGTC
CAATCCTTGAACAAACAGCTGGAGAAGAACGAGGAGACCGGTAATAGTGGGTTCAATGAACATTTGAAAGAAAACC
AGGTTGCAGACCCTG

13694.2

GA CTGTCCTGAACAAGGGACCTCTGACCAGAGAGCTGCAGGAGATGCAGAGTGGTGGCAGGAGTGGAAAGCCAAAGA
ACACCCACCTTCTCCCTTGAAGGAGTAGAGCAACCATCAGAAGATACTGTTTTATTGCTCTGGTCAAACAAGTCT
TCCTGAGTTGACAAAACCTCAGGCTCTGGTGACTTCTGAATCTGCAGTCCACTTTCCATAAGTTCTTGTGCAGACA
ACTGTTCTTTTGCTTCCATAGCAGCAACAGATGCTTTGGGGCTAAAAGGCATGTCCTCTGACCTTGCAGGTGGTGG
ATTTTGCTCTTTTACAACATGTACATCCTTACTGGGCTGTGCTGTACAGGGATGTCCTTGTGGACTGTTCTGCT
ATGGGGATATCTTCGTTGGACTGTTCTTCATGCTTAATTGCAGTATTAGCATCCACATCAGACAGCCTGGTATAAC
CAGAGTTGGTGGTTACTGATTGTAGCTGCTCTTTGTCCACTTCATATGGCACAAGTATTTTCTCAACATCCTGGC
TCTGGGAAG

13695.1

GAAATGTATATTTAATCATTCTCTTGAACGATCAGAACTCTRAAATCAGTTTTCTATAACARCATGTAATACAGTC
ACCGTGGCTCCAAGGTCCAGGAAGGCAGTGGTTAACACATGAAGAGTGTGGGAAGGGGGCTGGAAACAAAGTATTC
TTTTCTTCAAAGCTTCATTCTCAAGGCCTCAATTCAAGCAGTCATTGTCCTTGCTTTCAAAGTCTGTGTGTGC
TTCATGGAAGGTATATGTTTGTGCTTAATTTGAATTGTGGCCAGGAAGGGTCTGGAGATCTAAATTCAGAGTAA
GAAAACCTGAGCTAGAACTCAGGCATTTCTCTTACAGAACTTGCTTGCAGGGTAGAATGAANGGAAAGAACTTA
GAAGCTCAACAAGCTGAAGATAATCCCATCAGGCATTTCCCATAGGCCTTGCAACTCTGTTCACTGAGAGATGTTA
TCCTG

13695.2

AGTCTGGAGTGAGCAAACAAGAGCAAGAAACAARRAGAAGCCAAAAGCAGAAGGCTCCAATATGAACAAGATAAAT
CTATCTTCAAAGACATATTAGAAGTTGGGAAAATAATTCATGTGAAGTAGACAAGTGTGTTAAGAGTGATAAGTAA
AATGCACGTGGAGACAAGTGCATCCCCAGATCTCAGGGACCTCCCCCTGCCTGTCACCTGGGGAGTGAGAGGACAG
GATAGTGCATGTTCTTTGTCTCTGAATTTTTAGTTATATGTGCTGTAATGTTGCTCTGAGGAAGCCCCCTGGAAAGT
CTATCCCAACATATCCACATCTTATATTCCACAAATTAAGCTGTAGTATGTACCCTAAGACGCTGCTAATTGACTG
CCACTTCGCAACTCAGGGGCGGCTGCATTTTAGTAATGGGTCAAATGATTCATTTTTATGATGCTTCCCAAGGTG
CCTTGGCTTCTCTTCCCAACTGACAAATGCCCAAGTTGAGAAAAATGATCATAATTTTAGCATAAACCGAGCAATC
GGCGACCCC

13697.1

TAGCTGTCTTCCTCACTCTTATGGCAATGACCCCATATCTTAATGGATTAAGATAATGAAAGTGATTTTCTTACAC
TCTGTATCTATCACCAGAAGCTGAGGTGATAGCCCGCTTGTCATTGTCATCCATATTCTGGGACTCAGGCGGGAAC
TTTCTGGAATATTGCCAGGGAGCATGGCAGAGGGGCACAGTGCATTCTGGGGGAATGCACATTGGCTCAGCCTGGG
TAATGAGTGATATACATTACCTCTGTTCACTCACTATTGCCAGCACCAGTCACAAGGCCCCACCAAATACCAGAG
CCCAAGAAATGTAGTCCTGTTGATATGGTTTTGCTGTGTCCCAACCCAAATCTCATCTTGAATTGTAAGCTCCCAT
AATCCCATGTGTTGTGGGAGGGACCTGGTG

Fig. 1H

13697.2

ATCATGAGGATGTTACCAAAGGGATGGTACTAAACCATTGTATTCTGCTGTTTTTCACTGCTTTGAAGATACTA
CCTGAGACTGGGTAATTTATAAAACAAAAGAGATTTAATTGACTCACAGTTCTGCATGGCTGAAGAGGCCTCAGGAA
ACTTACAGTCATGGTGAAGGCAAAGGAGGAGCAAGGCATGTCTTACATGTCAGTAGGAGAGAGAGCGAGAGCAGG
AGAACCTGCCACTTATAAACCATTCAGATCTCATAACTCCCTATCATGAGAAAAACATGGAGGAAACCACTCAT
GATCCAATCACCTCCCGCCAGGTCCCTCCCTCGACACGTGGGGATTATAATTGAGGATTAGAGGGACACAGAGACA
AACCATATCATCATTGAGAAATCCACCCTCATAGTCCAATCAGTCTCTACCAGGCCCCACCTCCAACACTGGG
GATTGCAATTCAACATGAGATTTGGATGGGGACACAGATTCAAACCATATCATAC

13699.1&2

CATGGCCTTTCTCCTTAGAGGCCAGAGGTGCTGCCCTGGCTGGGAGTGAAGCTCCAGGCACTACCAGCTTTCTGTA
TTTTCCCGTTTGGTCCATGTGAAGAGCTACCACGAGCCCCAGCCTCACAGTGTCCACTCAAGGGCAGCTTGGTCTT
CTTGTCTGCAGAGGCAGGCTGGTGTGACCTGGGAACCTTGACCCGGGAACAACAGGTGGCCCAGAGTGAGTGTGG
CCTGGCCCCCTCAACCTAGTGTCCGTCTCTCTCTCTGGAGCCAGTCTTGAGTTTAAAGGCATTAAGTGTTAGAT
ACAAGCTCCTTGTGGCTGGAAAAACACCCCTCTGCTGATAAAGCTCAGGGGGCACTGAGGAAGCAGAGGCCCTTG
GGGGTGCCCTCCTGAAGAGAGCGTCAGGCCATCAGTCTGTCCCTCTGGTGTCTCCACGTCTGTTCTCACCTCC
ATCTCTGGGAGCAGCTGCACCTGACTGGCCACGCGGGGCGAGTGGAGGCACAGGCTCAGGGTGGCCGGGCTACCTG
GCACCCTATGGCTTACAAAGTAGAGTTGGCCAGTTTCCTTCCACCTGAGGGGAGCACTCTGACTCCTAACAGTCT
TCCTTGCCCTGCCATCATCTGGGGTGGCTGGCTGTCAAGAAAGGCCGGGCATGCTTTCTAACACAGCCACAGGAG
GCTTGAGGGCATCTTCCAGGTGGGGAAACAGTCTTAGATAAGTAAGGTGACTTGCCCTAAGGCCTCCAGCACCTT
TGATCTTGAGTCTCACAGCAGACTGCATGTSAACTGGAACCGAAAACATGCCTCAGTATAAAA

13703.3

CCAGAACCTCCTTCTCTTTGGAGAATGGGGAGGCCTCTTGAGACACAGAGGGTTTCACTTGGATGACCTCTAGA
GAAATTGCCAAGAAGCCACCTTCTGGTCCCAACCTGCAGACCCACAGCAGTCAGTTGGTCAGGCCCTGCTGTA
GAAGGTCACTTGGCTCCATTGCCTGCTTCCAACCAATGGGCAGGAGAGAAGGCCTTTATTTCTCGCCACCCATT
TCCTGTACCAGCACCTCCGTTTTAGTCAGYGTGTCCAGCAACGGTACCGTTTACACAGTCA

13705.1

TGCATGTAGTTTTATTTATGTGTTTTSGTCTGGAAAACCAAGTGTCCAGCAGCATGACTGAACATCACTCACTTC
CCCTACTTGATCTACAAGGCCAACGCCGAGAGCCCAGACCAGGATTCCAAACACACTGCACGAGAATATTGTGGAT
CCGCTGTCAGGTAAGTGTCCGTCACTGACCCARACGCTGTTACGTGGCACATGACTGTACAGTGCCACGTAACAGC
ACTGTACTTTTCTCCCATGAACAGTTACCTGCCATGTATCTACATGATTGAGAACATTTTGAACAGTTAATTCTGA
CACTTGAATAATCCCATCAAAAACCGTAAAATCACTTTGATGTTTGTAAACGACAACATAGCATCACTTTACGACAG
AATCATCTGGAAAAACAGAACGAATACATACATCTTAAAAATGCTGGGGTGGGCCAGGCACAGCTTCACGCC
TGTAATCCAGCACTTTGGGAGGCTTAAGCGGGTG

13705.2

TGGGGCGGAAAGAAGCCAAGGCCAAGGAGCTGGTGCGGCAGCTGCAGCTGGAGGCCGAGGAGCAGAGGAAGCAGAA
GAAGCGGCAGAGTGTGTGCGGCCCTGCACAGATACCTTCACTTGTCTGGATGGAAATGAAAATTACCCGTGTCTTGTG
GATGCAGACGGTGATGTGATTTCTTCCCAACCAATAACCAACAGTGAGAAGACAAAGGTTAAGAAAACGACTTCTG
ATTTGTTTTTGGAAAGTAACAAGTGCCACCAGTCTGCAGATTTGCAAGGATGTCATGGATGCCCTCATTCTGAAAAT
GGCAAGAAATGAAAAAGTACACTTTAGAAAATAAAGAGGAAGGATCACTCTCAGATACTGAAGCCGATGCAGTCTC
TGGACAACCTCCAGATCCCACAACGAATCCAGTGCTGGAAAGGACGGGCCCTTCTTCTGGTGGTGGAACANGTC
CCGGTGGTGGATCTTGGAANGGAACCTGAANGTGGTGTACCCCGTCCAAGGCCGACCTTGCCAC

13707.4

TCCCGCGCTCGCAGGGCNCGTGCCACCTGCCYGTCCGCGCGCTCGCTCGCTCGCCCGCCGCGCCGCGCTGCCGACC
GYCAGCATGCTGCCGAGAGTGGGCTGCCCCGCGCTGCCGCTGCCGCGCCGCGCTGCTGCCGCTGCTGCCGCTGC
TGCTGCTGC

13708.1&2

GGCGGGTAGGCATGGAAGTGAAGAAGCAAGAAGCTTTCAGACTACGTGGGGAAGAATGAAAAACCAAATTAT
CGCCAAGATTGAGCAAGGGGACAGGGAGCTCCAGCCGAGAGCCTATTATTAGCAGTGAGGAGCAGAAGCAGCTG
ATGCTGTACTATCACAGAAGACAAGAGGAGCTCAAGAGATTGGAAGAAAATGATGATGATGCCTATTTAACTCAC
CATGGGCGGATAACACTGCTTTGAAAAGACATTTTCATGGAGTGAAAGACATAAAGTGGAGACCAAGATGAAGTTC
ACCAGCTGATGACACTTCAAAGAGATTAGCTCACCT

13709.1

TCTGAAGGTAAATGTTTCATCTAAATAGGGATAATGRTAAACACCTATAGCATAGAGTTGTTTGAGATTAAATGA
GATAATACATGTAAAATTATGTGCCTGGCATAACAGCAAGATTGTTGTTGTTGTTGATGATGATGATGATGATA
ATATTTTTCTATCCCAGTGCACAAGTCTTGAACCTATTAGATAATCAATACATGTTTCTTGAAGTGAAGTCAAT
TTCCCATGTTGTCTGACTGATGAAGCCCTACATTTCTTCTAGAGGAGATGACATTTGAGCAAGATCTTAAAGAA
AATCAGATGCCTTCACCTGACCACTGCTTGGTGATCCCATGGCACTTTGTACATCTCTCCATTAGCTCTCATCTCA
CCAGCCCATCATTATTGTATGTGCTGCCTTCTGAAGCTTGCAAGCTGGCTACCATCMGGTAGAATAAAAATCATCCT
TTCATAAAATAGTGACCCTCCTTTTTTATTTGCATTTCCCAAAGCCAAGCACCGTGGGANGGTAG

13709.2

TATGAAGAAGGGAAAAGAAGATAATTTGTGAAAGAAATGGGTCCAGTTACTAGTCTTTGAAAAGGGTCAGTCTGTA
GCTCTTCTTAATGAGAATAGGCAGCTTTTCAGTTGCTCAGGGTCAGATTTCCCTTAGTGGTGTATCTAATCACAGGAA
ACATCTGTGGTTCCCTCCAGTCTCTTTCTGGGGGACTTGGGCCCATTCTCATTTTCAATTAATTAGAGGAAATAGA
ACTCAAAGTACAATTTACTGTTGTTTAAACAATGCCACAAAGACATGGTTGGGAGCTATTTCTTGATTTGTGTAAAA
TGCTGTTTTTGTGTGCTCATAATGGTTCCAAAAATTGGGTGCTGGCCAAAGAGAGATACTGTTACAGAAGCCAGCA
AGAAGACCTCTGTTTCATTACACCCCCGGGGATATCAGGAATTGACTCCAGTGTGTGCAAATCCAGTTTGGCCTAT
CTTCT

13712.1&2

TGAGGGACTGATTGGTTTGCTCTCTGCTATTCAATTCCCCAAGCCCACTTGTTCCCTGCAGCGTCCTCCTTCTCATT
CCCTTTAGTTGTACCCTCTCTTTTCATCTGAGACCTTTCCCTTCTTGATGTGCGCTTTTCTTCTTCTTGCTTTTTCTG
ATGTTCTGCTCAGCATGTTCTGGGTGCTTCTCATCTGCATCATTCCCTTCAGATGCTGTAGCTTCTTCCCTCCTCTT
TCTGCCTCCTTTTCTTTTTCTTTTTTTGGGGGGCTTGCTCTCTGACTGCAGTTGAGGGGGCCCCAGGGTCTGGCC
TTTGAGACGAGCCAGGAAGGCCTGCTCCTGGGCCTTAGGCGAGCAAGCTTGCCCTTCATTGTGATCCCAAGACGG
GCAGCCTTGTTGTGCTGTTGCGCCCTCACAGGCTTGAGCAGCATCTCATCAGTCAGAATCTTTGGGGACTTGGACC
CCTGGTTGTCGTCATCACTGCAGCTCTCCAAGTCTTTGTTTGGCTTCTCTCCACCTGAAGTCAATGTAGCCATCTT
CACAACTTCTGATACAGCAAGTTGGGCTTGGGATGATTATAACGGGTGGTCTCCTTAGAAAGGCTCCTTATCTGT
ACTCCATCCTGCCCAGTTTCCACTACCAAGTTGGCCGAGTCTTGTTGAAGAGCTCATTCCACCAGTGGTTTGTGA
ACTCCTTGGCAGGGTCATGTCCTACCCCATGAGTGTCTTGCTTCAGYGTACCCTGAGAGCCTGAGTGATACCATT
CTCCTTCCG

13714.1&2

GACAACATGAAATAAATCCTAGAGGACAAAATTAACCTCAATAGAGTGTAGTCTAGTTAAAACTCGAAAAATGAG
CAAGTCTGGTGGGAGTGGAGGAAGGGCTATACTATAAATCCAAGTGGGCCTCCTGATCTTAACAAGCCATGCTCAT
TATACACATCTCTGAAGTGGACATACCACCTTTACGCAGGAAACAGGGCTTGGAACTTCTAAGGGAAATTAACATG
CACCACCCACATCTAACCTACCTGCCGGGTAGGTACCATCCCTGCTTCGCTGAAATCAGTGCTC

13716.1&2

TTGGAATTAAATAAACCTGGAACAGGGAAGGTGAAAGTTGGAGTGAGATGTCTTCATATCTATACCTTTGTGCAC
AGTTGAATGGGAAGTGTGGTTAGGGCATCTTAGAGTTGATTGATGGAAAAAGCAGACAGGAAGTGGTGGGAG
GTCAAGTGGGGAAGTTGGTGAATGTGGAATAACTTACCTTTGTGCTCCACTTAAACCAGATGTGTTGCAGCTTTCC
TGACATGCAAGGATCTACTTTAATTCCACACTCTCATTAAATAAATTGAATAAAAGGGAATGTTTTGGCACCTGATA
TAATCTGCCAGGCTATGTGACAGTAGGAAGGAATGGTTTCCCCTAACAAAGCCCAATGCACTGGTCTGACTTTATAA
ATTATTTAATAAAATGAAGTATTATC

13718.2

AAACTGGACCTGCAACAGGGACATGAATTTACTGCARGGTCTGAGCAAGCTCAGCCCCTCTACCTCAGGGCCCCAC
AGCCATGACTACCTCCCCAGGAGCGGGAGGGTGAAGGGGGCCTGTCTCTGCAAGTGGAGCCAGAGTGGAGGAATG
AGCTCTGAAGACACAGCACCCAGCCTTCTCGCACCAGCCAAGCCTTAAGTGCCTGCCTGACCCTGAACCAGAACCC
AGCTGAACTGCCCCCTCAAGGGACAGGAAGGCTGGGGGAGGGAGTTTACAACCAAGCCATTCCACCCCCTCCCCT
GCTGGGGAGAATGACACATCAAGCTGCTAACAATTGGGGGAAGGGGAAGGAAGAAAACCTCTGAAAACAAAATCTTG
T

13722.3

CATGCGTTTTACCACTGTTGGCCAGGCTGGTCTCGAACTCCTGGCCTCAAGCAATCCACCCGCCTCAGCCTCCAAA
AGTGCTGGGATTACAGATGTGAGCCATGGCACCATGCCAAAAGGCTATATTCCTGGCTCTGTGTTTCCGAGACTGC
TTTTAATCCCAACTTCTCTACATTTAGATTAATAAATATTTTATTCATGGTCAATCTGGAACATAATTACTGCATC
TTAAGTTTCCACTGATGTATATAGAAGGCTAAAGGCACAATTTTTATCAAATCTAGTAGAGTAACCAAACATAAAA
TCATTAATTACTTTCAACTTAATACTAATTGACATTCCTCAAAGAGCTGTTTTCAATCCTGATAGGTTCTTTAT
TTTTTCAAATATATTTGCCATGGGATGCTAATTTGCAATAAGGCGCATAATGAGAATACCCCAAACCTGGA

13722.4

GTTGGACCCCCAGGGACTGGAAAGACACTTCTTGCCCCGAGCTGTGGCGGGAGAAGCTGATGTTCTTTTTATTATG
CTTCTGGATCCGAATTTGATGAGATGTTTGTGGGTGTGGGAGCCAGCCGTATCAGAAATCTTTTTAGGGAAGCAAA
GGCGAATGCTCCTTGTGTTATATTTATTGATGAATTAGATTCTGTTGGTGGGAAGAGAATTGAATCTCCAATGCAT
CCATATTCAAGGCAGACCATAAATCAACTTCTTGCTGAAATGGATGGTTTTAAACCCAATGAAGGAGTTATCATAA
TAGGAGCCACAACTTCCCAGAGGCATTAGATAATGCCTTAATACCGTCCTGGTCGTTTTGACATGCAAGTTACAG
TTCCAAGGCCAGATGTAAAAGGTGCAACAGAAATTTTGAATGGTATCTCAATAAAATAAAGTTTGATCAATCCCG
TTGATCCAGAAATTATAGCCTCGAGGTACTGGTGGCTTTTCCGGAAGCAGAGTTGGGAGAATCTT

13724-13698-13748

GCCTACAACATCCAGAAAGAGTCTACCCTGCACCTGGTGCTSCGTCTCAGAGGTGGGATGCAGATCTTCGTGAAGA
CCCTGACTGGTAAGACCATCACTCTCGAAGTGGAGCCGAGTGACACCATYGAGAACGTCAAAGCAAAGATCCARGA
CAAGGAAGGCRTYCCTCCTGACCAGCAGAGTTGATCTTTGCCGAAAGCAGCTGGAAGATGGDCGCACCCTGTCT
GACTACAACATCCAGAAAGAGTCYACCCTGCACCTGGTGCTCCGTCTCAGAGGTGGGATGCGATCTTCGTGAAGA
CCCTGACTGGTAAGACCATCACCTCGAGGTGGAGCCAGTGACACCATCGAGAATGTCAAGGCAAAGATCCAAGA
TAAGGAAGGCATCCCTCCTGATCAGCAGAGTTGATCTTTGCTGGGAAACAGCTGGAAGATGGACGCACCCTGTCT
GACTACAACATCCAGAAAGAGTCCACTCTGCACTTGGTCTGCGCTTGAGGGGGGGTGTCTAAGTTTCCCCTTTTA
AGGTTTCAACAAATTTTATTGCACTTTCTTTCAATAAAGTTGTTGCATTCCC

13730.1

GAAGTGGGCCCCTGAGCCCAAGTCATGCCTTGTGTCCGCATCTGCCGTGTCACCTCTGTCCTGCCCTCACCCCTC
CCTCCTGGTCTTCTGAGCCAGCACCATCTCCAAATAGCCTATTCTTCCTGCAAATCACACACACATGCGGGCCAC
ACATACCTGCTGCCCTGGAGATGGGGAAGTAGGAGAGATGAATAGAGGCCCATACATTGTACAGAAGGAGGGGCAG
GTGCAGATAAAAGCAGCAGACCCAGCGGCAGCTGAGGTGCATGGAGCACGGTTGGGGCCGGCATTGGGCTGAGCAC
CTGATGGGCCCTCATCTCGTGAATCCTCGAGGCAGCGCCACAGCAGAGGAGTTAAGTGGCACCTGGGCGGAGCAGAG
CAGGAGACTGAGGGTCAGAGTGGAGGCTAAGCTGCCCTGGAACCTCTCAATCTTGCCTGCCCCCTAGTATGAAGCC
CCCTTCCTGCCCTACAATTCCTGA

13732.1

ATGGATCTTACTTTGCCACCCAGGTTGGAGTGCAGTGTGCAATCTTGGCTCACTGCAGCCTTAACCTCCCAGGCT
CAAGCTATCCTCCTGCCAAAGCCTTCCACATAGCTGGGACTACAGGTACACNGCCACCACACCCAGCTAAAATTTT
TGTATTTTTTTGTAGAGACGGGATCTCGCCACGTTGCCAGGCTGGTCCCATCCTGACCTCAAGCAGATCTGCCAC
CTCAGCCCCCAACGTGCTAGGATTACAGGCGTGAGCCACCGCACCCAGCCTTTGTTTTGCTTTTAATGGAATCAC
CAGTTCCTCCTCGTGTCTCAGCAGCAGCTGTGAGAAATGCTTTGCATCTGTGACCTTTATGAAGGGGAACCTCCAT
GCTGAATGAGGGTAGGATTACATGCTCCTGTTTCCCGGGGTCAAGAAAGCCTCAGACTCCAGCATGATAAGCAGG
GTGAG

13732.2

ATAGGGGCTTTAAGGAGGGAATTCAGGTTCAATGAGGTGTAAGGCCAGGGCTCTTATCCAGTAAGACTGGGGTCC
TTAGATGAGAAAGAGACACCCGAGGTCTTCTCTCTGCCGTGTGAGGATGCATCAAGAAGGCGGCCGTCTGCAAGC
GAAGGAGAGGCCGCACCAGAAACCGACACCTTCATCTTGACTTGACGCTCTAGAACTGAGAAAATAACTGTCTG
TTGGTTAAGCCACCCAGTTTGTAGTATTCTCTTATGGCTTCCTAAGCAGACTAACAAACAAACACCCAAAATTAAC
TGATGGCTTCGCTGTCTTCTGTAAAAATTGCTATGAGAGAACTTTTCACTCACTGTTTTGCAGTTTCTCCCTCAGT
CCCTGGTTCTTTCTTCTCACATAATCCCAATTTCAATTTATAGTTTCATGGCCCAGGCAGAGTCATTTCATCACGGCA
TCTCCTGAGCTAAACCAGCACCTGCTCTGCTCACTTCTTGACTGGCTGCTCATCATCAGCCCTCTTGAGAGATTT
CATTTCTCCCGTGCCAGGTAATTCACGCACCAAGCTCA

13735.1

GGATAATGAAGTTGTTTTATTTAGCTTGGACAAAAAGGCATATTCCTCTATTTTCTTATACAACAAATATCCCCAA
AATAAGCAAGCATATATATCTTGAATGTGTAATAATCCAGTGATAAAACAAGAGCAGTACTTTAAAAGAAAAAAA
ATATGTATTTCTGTCAAGTTAAAATGAGAATCAAAACCATTTACTCTGCTAACTCATTATTTTTGCTTTCTTTTT
GGTTAAGAGAGGCAATGCAATACTGAAAAAGGTTTTATCTTATCTGGCATTGGAATTAGACATATTCAAACCC
CAGCCCCCATTTCCAAACTTTAAGACCACAAACAAGTAATTTACTTTTCTGAACATTGGTTTTTTCTGGAAAATGG
GAATTATAAAATAGACTTTGCAGACTCTTATGAGATTAAATAAGATAATGTATGAAATTCCTTCTTTTTTACT
TCTTTTCTTTTTGAGATGGAGTCTCACCCCGTCACCCAGGCTGGAGTACAGTG

13735.2

CCACTGCACTCCAGCCTGGGTGACGGAGTGAGACTCTGTCTCAAAAAACAAACAAACAAACAAACAAAACTGA
AAAGGAAATAGAGTTCCTCTTTCCTCATATATGAATATATTATTTCAACAGATTGTTGATCACCTACCATATGCTT
GGTATTGTTCTAATTGCTGGGGATACAGCAAGAGGTTCTGCAGAACTTCATGGAGCATGAAAGTAAATAAACAAAG
TTAATTTCAAGGCCAGGCATGGTTGCTCACACCTTTAGTCCCAGCACTTTGGGAGGCTGAGGCAGGTGGATCACTT
GGGCCCAGGAGTTCAAGGCTGCAGTGAGCCAAGATTGTGCCACTACTCTCCAGGCTGGGCAACAGAGCAAGACCTT
GTCTCAGGGGGAACAAAAAGTTAATTTAGATTGTTTGTAAAGTGCTGTAAAGGAAGTAAATAGGTTGATATTCAAGA
GAGCACCTGAAGGCCAGGCGTGGTGGCTCACGCCTGTGGTCTAACGCTTTGGGAAGCCCGAGCGGGCGGATCACAA
GGTCAGGAGAATTTTGGCCAGGCATGGTG

13736.1

AGAATCCATTTATTGGGTTTTAACTAGTTACACAACCTGAAATCAGTTTGGCACTACTTTATACAGGGATTACGCC
TGTGTATGCCGACACTTAAATACTGTACCAGGACCACTGCTGTGCTTAGGTCTGTATTCAGTCATTCAGCATGTAG
ATACTAAAAATATACTGTAGTGTTCTTTAAGGAAGACTGTACAGGGTGTTGCAAGATGACATTCACCAATTTG
TGAATTATTTCAACCCAGAAGATACCTTTCACTCTATAAACTTGTCTATAGGCAAACATGTGGTGTTAGCATTGAGA
GATGCACACAAAAATGTTACATAAAAGTTTACAGACATTCTAATGATAAGTGAACGAAAAAAAAAAAAACCCACAT
CTCAATTTTTGTAACAAGATAAAGAAAATAATTTAAAAACACAAAAAATGGCATTCACTGGGTACAAAGCC

13737.1&2

CAAATATTTAATATAAATCTTTGAAACAAGTTCAGAKGAAATAAAAAATCAAAGTTTGCAAAAACGTGAAGATTAAC
TTAATTGTCAAATATTCCTCATTGCCCCAAATCAGTATTTTTTTTATTTCTATGCAAAAGTATGCCTTCAAACCTGC
TTAAATGATATATGATATGATACACAAACAGTTTTTCAAATAGTAAAGCCAGTCATCTTGCAATTGTAAGAAATAG
GTAAAAGATTATAAGACACCTTACACACACACACACACACACACACACAGTGTGCACCGCCAATGACAAAAACA
ATTTGGCCTCTCTAAATAAGAACATGAAGACCCTTAATTGCTGCCAGGAGGGAACACTGTGTCACCCCTCCCTA
CAATCCAGGTAGTTTTCTTTAATCCAATAGCAAATCTGGGCATATTTGAGAGGAGTGATTCTGACAGCCACSGTTG
AAATCCTGTGGGGAACCATTCATGTCCACCCACTGGTGCCCTGAAAAAATGCCAATAATTTTTGCTCCCACTTCT
GCTGCTGTCTCTTCCACATCTCACATAGACCCCGAGCCCGCTGGCCCTGGCTGGGCATCGCATTGCTGGTAGAG
CAAGTCATAGGTCTCGTCTTTGACGTCACAGAAGCGATACACCAAATTGCCTGGTGGTCATTGTCATAACCAG

Fig. 1N

13738.1

TTTGACTTTAGTAGGGGTCTGAACTATTTATTTTACTTTGCCMGTAAATTTARACCYTATATATCTTTTCATTATG
CCATCTTATCTTCTAATGBCAAGGGAACAGWTGCTAAMCTGGCTTCTGCATTWATCACATTA AAAATGGCTTTCTT
GGAAAATCTTCTTGATATGAATAAAGGATCTTTTAVAGCCATCATTTAAAGCMGGNTTCTCTCCAACACGAGTCTG
CTSASGGGGGGKGAGCTGTGAACTCTGGCTGAAGGCTTTCCCATACACACTGCAATGACMTGGTTTCTGACCAGBG
TGAGTTA

13738.2

AGAGAAGCCCCATAAATGCAATCAGTGTGGGAAGGCCTTCAGTCAGAGCTCAAGCCTTTTCTCCATCATCGGGTT
CATACTGGAGAGAAACCCTATGTATGTAATGAATGCGGCAGAGCCTTTGGTTTTAACTCTCATCTTACTGAACACG
TAAGGATTCACACAGGAGAAAAACCCTATGTTTGTAATGAGTGCGGCAAAGCCTTTCTGTCGGAGTTCCACTCTTGT
TCAGCATCGAAGAGTTCACACTGGGGAGAAGCCCTACCAGTGCGTTGAATGTGGGAAAGCTTTTCAGCCAGAGCTCC
CAGCTCACCTACATCAGCCGAGTTCACACTGGAGAGAAGCCCTATGACTGTGGTGACTGTGGGAAGGCCTTCAGC
CGGAGGTCAACCCTCATTAGCATCAGAAAGTTCACAGCGGAGAGACTCGTAAGTGAGAAAAACATGGTCCAGCCT
TTGTTTCATGGCTCCAGCCTCAGCAGATGGACAGATTCCCACTGGAGAGAAGCACGGCAGAACCTTTAACCATGG
TGCAATCTCATTCTGCGCTGGACAGTTC

13739.1&2

GAGACAGGGTCTCACTTTGTCACCCAGGCTGGAATGCAGTGGTGCGATCTTACGTAGCTCACTGCAGCCCTGACCT
CCTGGACTCAAACAATTCTCCTGCCTCAGCCCTGCAAGTAGCTGGGACTGTGGGTGCATGCCACCATGCCTGGCTA
ACTTTTGTAGTTTTTGTAAAGATGGGGTTTTGCCATGTTGCACATGCTGGTCTTGAACCTCTGAGCTCAAACGATC
TGCCACCTCGGCCTCCAGAAATGTTGGGATTACAGGGGTAAACCACCACGCCTGGCCCCATTAGGGTATTCTTAG
CATCCACTTGCTCACTGAGATTAATCATAAGAGATGATAAGCACTGGAAGAAAAAAATTTTACTAGGCTTTGGAT
ATTTTTTCTTTTTTCAGCTTTATACAGAGGATTGGATCTTTAGTTTTCTTTAACTGATAATAAACATTGAAAG
GAAATAAGTTTACCTGAGATTCACAGAGATAACCGGCATCACTCCCTTGCTCAATTCCAGTCTTTACCACATCAAT
TATTTTCAGAGGTGCAGGATAAAGGCCTTTAGTCTGCTTTGCACTTTTTCTTCCACTTTTTTGTAACCTGTTGC
CTGACAAATGGAATTGACAGCGTATGCCATGACTATTCCATTTGTGAGGCATACGCTGTCAATTTTTCCACCAATC
CCTTGTCTCTCTTTGGAGAGATCTTCTTATCAGCTAGTCCTTTGGCAAAAGTAATTGCAACTTCTTCTAGGTATTC
TATTGTCCGTTCCACTGGTGGAAACCCTGGGACCAGGACTAAAACCTCCAG

13741.1

ATCTCATATATATATTTCTTCCTGACTTTATTTGCTTGCTTCTGNCACGCATTTAAATATCACAGAGACCAAAAT
AGAGCGGCTTTCTGGTGGAACGCATGGCAGTCACAGGACAAAATACAAAAC TAGGGGGCTCTGTCTTCTCATACAT
CATACAATTTTCAAGTATTTTTTTATGTACAAAGAGCTACTCTATCTGAAAAAAATTA AAAAATAAATGAGACA
AGATAGTTTATGCATCCTAGGAAGAAAGAATGGGAAGAAAGAACGGGGCAGTTGGGTACAGATTCTGTCCCCTGT
TCCCAGGGACCACTACCTTCCTGCCACTGAGTTCCCCACAGCCTCACCCATCATGTCACAGGGCAAGTGCCAGGG
TAGGTGGGGACCAAGTGGAGACAGGAACCAGCAACATACTTTGGCCTGGAAGATAAGGAGAAAGTCTCAGAAACACA
CTGGTGGGAAGCAATCCACNGGCCGTGCCCCANGAGCTTCCACCTGCTGCTGGCTCCCTGGGTGGCTTTGGGAA
CAGCTTGGGCAGGCCCTTTTGGGTGGGNCCAACCTGGGCCTTTGGGCCGTGTGGAAAG

Fig. 10

13742.1

AAACATTGAGATGGAATGATAGGGTTTCCCAGAATCAGGTCCATATTTTAACTAAATGAAAATTATGATTTATAGC
CTTCTCAAATACCTGCCATACTTGATATCTCAACCAGAGCTAATTTTACCTCTTTACAAATTAATAAGCAAGTAA
CTGGATCCACAATTTATAATACCTGTCAATTTTTCTGTATTAAACCTCTATCATAGTTTAAAGCCTATTAGGGTAC
TTAATCCTTACAAATAAACAGGTTTAAATCACCTCAATAGGCAACTGCCCTTCTGGTTTTCTTCTTTGACTAAAC
AATCTGAATGCTTAAGATTTTCCACTTTGGGTGCTAGCAGTACACAGTGTTACACTCTGTATTCCAGACTTCTTAA
ATTATAGAAAAAGGAATGTACACTTTTTGTATTCTTTCTGAGCAGGGCCGGGAGGCAACATCATCTACCATGGTAG
GGACTTGTATGCATGGACTACTTTA

14351.1

ACTCTGTCGCCCAGGCTGGAGCCCBATGGMCGCATCTCGACTCCCTGCAAGCTMCGCCTCACAGGWTGATGCCATT
CTCCTGCCTCAGCATCTGGAGTAGCTGGGACTACAGGCGCCAGCCACCATGCCAGCTAATTTTT

14351.2

ACCTTAAAGACATAGGAGAATTTATACTGGGAGAGAAAGCTTACAAATGTAAGGTTTCTGACAAGACTTGGGAGTG
ATTACACCTGGAACAACATACTGGACTTCACACTGGABAGAAACCTTACAAGTGAATGAGTGTGGCAAAGCCTT
TGGCAAGCAGTCAACACTTATTCACCATCAGGCAATTCA

14354.2

AGTCAGGATCATGATGGCTCAGTTTCCCACAGCGATGAATGGAGGGCCAAATATGTGGGCTATTACATCTGAAGAA
CGTACTAAGCATGATAAACAGTTTGATAACCTCAAACCTTCAGGAGGTACATAACAGGTGATCAAGCCCGTACTT
TTTTCTACAGTCAGGTCTGCCGGCCCCGGTTTTAGCTGAAATATGGGCCTTATCAGATCTGAACAAGGATGGGAA
GATGGACCAGCAAGAGTTCTCTATAGCTATGAAACTCATCAAGTTAAAGTTGCAGGGCCAACAGCTGCCTGTAGTC
CTCCCTCCTATCATGAAACAACCCCTATGTTCTCTCCACTAATCTCTGCTCGTTTTGGGATGGGAAGCATGCCCA
ATCTGTCCATTCATCAGCCATTGCCTCCAGTTGCACCTATAGCAACACCCTTGTCTTCTGCTACTTCAGGGACCAG
TATTCCTCCCTAATGATGCCTGCT

14354.1

CTTTCGATTTCTTCAATTTGTCACGTTTGATTTTATGAAGTTGTTCAAGGGCTAACTGCTGTGTATTATAGCTTT
CTCTGAGTTCCTTCAGCTGATTGTTAAATGAATCCATTTCTGAGAGCTTAGATGCAGTTTCTTTTTCAAGAGCATC
TAATTGTTCTTTAAGTCTTTGGCATAATTCTTCTTTTCTGATGACTTTCTATGAAGTAACTGATCCCTGAATCA
GGTGTGTTACTGAGCTGCATGTTTTAATTCTTTCTGTTAATAGCTGCTTCTCAGGGACCAGATAGATAAGCTTAT
TTTGATATTCCTTAAGCTCTTGGTGAAGTTGTTGATTTCCATAATTTCCAGGTCACACTGGTTATCCCAAACCTC
T

16431.1.2

TGGAGGTGAAACGGAGGCAAGAAAGGGGGCTACCTCAGGAGCGAGGGACAAAGGGGGCGTGAGGCACCTAGGCCGC
GGCACCCCGGCGACAGGAAGCCGTCCTGAACCGGGCTACCGGGTAGGGGAAGGGCCCGCTAGTCCTCGCAGGGCC
CCAGAGCTGGAGTCGGCTCCACAGCCCCGGGCGCTCGGCTTCTCACTTCTTGACCTCCCCGGCGCCCGGGCCTGA
GGACTGGCTCGGCGGAGGGAGAAGAGGAAACAGACTTGAGCAGCTCCCCGTTGTCTCGCAACTCCACTGCCGAGGA
ACTCTCATTTCTTCCCTCGCTCCTTACCCCCACCTCATGTAGAAAGGTGCTGAAGCGTCCGGAGGGAAGAAGAA
CCTGGGCTACCGTCCTGGCCTTCCCMCCCCCTTCCCGGGCGCTTTGGTGGGCGTGAGATTGGGGTTGGGGGGTG
GGTGGGGGTTCTTTTTTGGAGTGCTGGGGAACTTTTTCCCTTCTTCAGGTCAGGGGAAAGGGAATGCCAATTCA
GAGAGACATGGGGGCAAGAAGGACGGGAGTGGAGGAGCTTCTGGAACTTTGACGCCGTATCGGGAGGCGGCAGCT
CTAACAGCAGAGAGCGTCACCGCTTGGTATCGAAGCACAAGCGGCATAAGTCCAAACACTCCAAAGACATGGGGTT
GGTGACCCCGAAGCAGCATCCCTGGGCACAGTTATCAAACCTTTGGTGGAGTATGATGATATCAGCTCTGATTCC
GACACCTTCTCCGATGACATGGCCTTCAAACCTAGACCGAAGGGAGAACGACGAACGTCTGGATCAGATCGGAGCG
ACCGCCTGCACAAACATCGTCACCACCAGCACAGGCGTTCCCGGGACTTACTAAAAGCTAAACAGACCG

16432-1

GACATGTTTGCCTGCAGGGGACCAGAGACAATGGGATTAGCCAGTGCTCACTGTTCTTTATGCTTCCAGAGAGGAT
GGGGACAGCTCTCAGGTGAGAATCCAGGCTGAGAAGGCCATGCTGGTTGGGGGCCCCCGGAAGCACGGTCCGGATC
CTCCCTGGCATCAGCGTAGACCCGCTGCTCAGGCTTGGGGTACCAAACTCATGCTCTGTACTGTTTTGGCCCCATG
CGGTGAGAGGAAAACCTAGAAAAAGATTGGTCTGTCTAAGGAATCAGCTGCCCCCTCATCCTCCGCATCCAATGCT
GGTGACAACATATTCCCTCTCCAGGACACAGACTCGGTGACTCCACACTGGGCTGAGTGGCCTCTGGAGGCTCGT
GGCCTAAGGCAGGGCTCCGTAAGGCTGATCGGCTGAACTGGGTGGGTGAGGGTTTCTGACCCTTCGCTTCCCATC
CCATAACCGCTGTCAATGAGCTCACACTGTGGTCA

16432-2

GATGGCATGGTCGTTGCTAATGTGCCTGCTGGGATGGAGCACTTCTCCTGTGAGCCCAGGGGACCCGCCTGTCCC
TGGAGCTTGGGGCAAGGAGGGAAGAGTGATACCAGGAAGGTGGGGCTGCAGCCAGGGGCCAGAGTCAGTTCAGGGA
GTGGTCCTCGGCCCTCAAAGCTCCTCCGGGGACTGCTCAGGAGTGATGGTGCCCTGGAGTTTGGCCCAACTTCCCT
GGCCACCCTGGAAGGTGCCTGGCTGCTCCAGGCCCTTAGGCTGGGCTGATGGGTTTTCTCCAGGACACAAGTATCAT
TAAAGCCACCCTCTCCTCAGCTTGTGAGGCCGCACATGTGGGACAGGCTGTGCTCACAACCCCTCGCCTGCCCTG
CCCTCCATCAGGAGGAGCCAGTGGAACCTTCGGAAGCTCCAGCATCTCAGCAGCCCTCAAAAGTCGTCTGGGG
CAAGCTCTGGTTCTCCTGACTGGAGGTCATCTGGGCTTGGCCTGCTCTCTCTCG

17184.3

TAAAAAAGTGTAACAAAGGTTTATTTAGACTTTCTTCATGCCCCAGATCCAGGATGTCTATGTAAACCGTTATCT
TACAAAGAAAGCACAATATTTGGTATAAACTAAGTCAGTGACTTGCTTAAGTGAATAGCGTCCATCCAAAAGTGG
GTTTAAGGTAAAACCTACCTGACGATATTGGCGGGGATCCTGCAGTTTGGACTGCTTGCCGGGTTTGTCCAGGGTTC
CGGGTCTGTTCTTGGCACTCATGGGGACAGGCATCCTGCTCGTCTGTGGGGCCCCGCTGGAGCCCTTACGTGAAGC
TGAAGGTATCGACCSTAGGGGGCTCTAGGGCAGTGGGACCTTCATCCGGAACATAACAAGGGTCGGGGAGAGGCCTC
TTGGGCTATGTGGG

Fig. 1Q

17184.4

CAAGCGTTCCTTTATGGATGTAAATTCAAACAGTCATGCTGAGCCATCCCGGGCTGACAGTCACGTTWAAGACACT
AGGTCGGGCGCCACAGTGCCACCCAAGGAGAAGAAGAATTTGGAATTTTCCATGAAGATGTACGGAAATCTGATG
TTGAATATGAAAATGGCCCCCAAATGGAATTCAAAAGGTTACCACAGGGGCTGTAAGACCTAGTGACCTCCTAA
GTGGGAAAGAGGAATGGAGAATAGTATTTCTGATGCATCAAGAACATCAGAATATAAACTGAGATCATAATGAAG
GAAAATTCATATCCAATATGAGTTTACTCAGAGACAGTAGAACTATTCCCAGG

17185.1

TAGGAATAACAAATGTTTATTCAGAAATGGATAAGTAATACATAATCACCTTCATCTCTTAATGCCCCTTCCTCT
CCTTCTGCACAGGAGACACAGATGGGTAAACATAGAGGCATGGGAAGTGGAGGAGGACACAGGACTAGCCCACCACC
TTCTCTTCCCGGTCTCCAAGATGACTGCTTATAGAGTGGAGGAGGCAAACAGGTCCCCTCAATGTACCAGATGGT
CACCTATAGCACAGCTCCAGATGGCCACGTGGTTGCAGCTGGACTCAATGAACTCTGTGACAACCAGAAGATAC
CTGCTTTGGGATGAGAGGGAGGATAAAGCCATGCAGGGAGGATATTTACCATCCCTACCCTAAGCACAGTGCAAGC
AGTGAGCCCCCGGCTCCAGTACCTGAAAAACCAAGGCCTACTGNCTTTTGGATGCTCTCTTGGGCCACG

17188.2

AAGCCTCCTGCCCTGGAAATCTGGAGCCCCCTTGGAGCTGAGCTGGACGGGGCAGGGAGGGGCTGAGAGGCAAGACC
GTCTCCCTCCTGCTGCAGCTGCTTCCCCAGCAGCCACTGCTGGGCACAGCAGAAACGCCAGCAGAGAAAATGGGAG
CCGAGAGTCTTAGCCCTGGAGCTGAGGCTGCCTCTGGGCTGACCCGCTGGCTGTACGTGGCCAGAACTGGGGTTG
GCATCTGGCATCCATTTGAGGCCAGGGTGGAGGAAAGGGAGGCCAACAGAGGAAAACCTATTCCTGCTGTGACAAC
ACAGCCCTTGTCACGCAGCCTAAGTGCAGGGAGCGTGATGAAGTCAGGCAGCCAGTCGGGGAGGACGAGGTAAC
TCAGCAGCAATGTCACCTTGAGCCTATGCGCTCAATGGCCCGGAGGGGCAGCAACCCCCCGCACACGTGAGCCAA
CAGCAGTGCTCTGCAGGCACCAAGAGAGCGATGATGGACTTGAGCGCCGTGTTT

17190.1

GTTTGGCAGAAGACATGTTTAATAACAFTTTCATATTTAAAAAATACAGCAACAATTCTCTATCTGTCCACCATCT
TGCCTTGCCCTTCCTGGGGCTGAGGCAGACAAAGGAAAGGTAATGAGGTTAGGGCCCCCAGGCGGGCTAAGTGCTA
TTGGCCTGCTCCTGCTCAAAGAGAGCCATAGCCAGCTGGGCACGGCCCCCTAGCCCCCTCAGGTTGCTGAGGCGGC
AGCGGTGGTAGAGTTCTTCACTGAGCCGTGGGCTGCAGTCTCGCAGGGAGAACTTCTGCACCAGCCCTGGCTCTAC
GGCCCGAAAGAGGTGGAGCCCTGAGAACCGGAGGAAAACATCCATCACCTCCAGCCCCCTCAGGGCTTCCTCCTCT
TCCTGGCCTGCCAGTTCACCTGCCAGCCGGGCTCGGGCCGCCAGGTAGTCAGCGTTGTAGAAGCAGCCCTCCGAG
AAGCCTGCCGGTCAAATCTCCCCGCTATAGGAGCCCCCGGGAGGGGTGAGCACC

Fig. 1R

17190.2

CAAGTTGAACGTCAGGCTTGGCAGAGGTGGAGTGTAGATGAAAACAAAGGTGTGATTATGAAGAGGATGTGAGTCC
TTTGGGTGTAGGAGAGAAAGGCTGTTGAGCTTCTATTTCAAGATACTTTTACCTGTGCAAAAAGCACATTTTCCAC
CTCCTTCTCATGGCATTGTGTAAAGGTGAGTATGATTCCATTCCATCTGCATTTTAGAGGTGAAGAATAACGTAC
AAGGGATTCAGTGATTAGCAAGGGACCCCTCACTAAGTGTGATGGAGTTAGGACAGAGCTCAGCTGTTTGAATCT
CAGAGCCCAGGCAGCTGGAGCTGGGTAGGATCCTGGAGCTGGCACTAATGTGAGGTGCATTCCCTCCAACCCAGGC
TCAGATCCGGAACCTGACCGTGCTGACCCCCGAAGGGGAGGCAGGGCTGAGCTGGCCCGTTGGGCTCCCTGCTCCT
TTCACACCACACTCTCGCTTTGAGGTGCTGGGCTGGGACTACTTCACAGAGCAGC

17191.2&89.2

TGGCCTGGGCAGGATTGGGAGAGAGGTAGCTACCCGGATGCAGTCCTTTGGGATGAAGACTATAGGGTATGACCCC
ATCATTTCCCCAGAGGTCTCGGCCTCCTTTGGTGTTGAGCAGCTGCCCTGGAGGAGATCTGGCCTCTCTGTGATT
TCATCACTGTGCACACTCCTCTCCTGCCCTCCACGACAGGCTTGCTGAATGACAACACCTTTGCCAGTGCAAGAA
GGGGGTGCGTGTGGTGAAGTGTGCCCGTGGAGGGATCGTGGACGAAGGCGCCCTGCTCCGGGGCCCTGCAGTCTGGC
CAGTGTGCCGGGGCTGCACTGGACGTGTTTACGGAAGAGCCGCCACGGGACCGGGCCTTGGTGGACCATGAGAATG
TCATCAGCTGTCCCCACCTGGGTGCCAGCACCAAGGAGGCTCAGAGCCGCTGTGGGGAGGAAATTGCTGTTGAGTT
CGTGGACATGGTGAAGGGGAAATCTCTACGGGGTGTGAATGCCAGGCCCTT

Fig. 1S

AGCCAGATGGCTGAGAGCTGCAAGAAGAAGTCAGGATCATGATGGCTCAGTTTCCCACAGCGATGAATGGAGGGCC
AAATATGTGGGCTATTACATCTGAAGAACGTACTAAGCATGATAAACAGTTTGATAACCTCAAACCTTCAGGAGGT
TACATAACAGGTGATCAAGCCCGTACTTTTTCTACAGTCAGGTCTGCCGGCCCCGGTTTTAGCTGAAATATGGG
CCTTATCAGATCTGAACAAGGATGGGAAGATGGACCAGCAAGAGTTCTCTATAGCTATGAAACTCATCAAGTAAA
GTTGCAGGGCCAACAGCTGCCTGTAGTCCTCCCTCCTATCATGAAACAACCCCTATGTTCTCTCCACTAATCTCT
GCTCGTTTTGGGATGGGAAGCATGCCAATCTGTCCATTCATCAGCCATTGCCTCCAGTTGCACCTATAGCAACAC
CCTTGTCTTCTGCTACTTCAGGGACCAGTATTCTCCCCTAATGATGCCTGCTCCCCTAGTGCCTTCTGTTAGTAC
ATCCTCATTACCAAATGGAAGTCCAGTCTCATTAGCCTTTATCCATTCTTATTCTTCTTCAACATTGCCTCAT
GCATCATCTTACAGCCTGATGATGGGAGGATTTGGTGGTGCTAGTATCCAGAAGGCCAGTCTCTGATTGATTTAG
GATCTAGTAGCTCAACTTCCTCAACTGCTTCCCTCTCAGGGAACCTCACCTAAGACAGGGACCTCAGAGTGGGCAGT
TCCTCAGCCTTCAAGATTAAGTATCGGCAAAAATTTAATAGTCTAGACAAAGGCATGAGCGGATACCTCTCAGGT
TTTCAAGCTAGAAATGCCCTTCTTCAGTCAAATCTCTCAAACCTCAGCTAGCTACTATTTGGACTCTGGCTGACA
TCGATGGTGACGGACAGTTGAAAGCTGAAGAATTTATTCTGGCGATGCACCTCACTGACATGGCCAAAGCTGGACA
GCCACTACCACTGACGTTGCCTCCCGAGCTTGCCCTCCATCTTTCAGAGGGGGAAAGCAAGTTGATTCTGTAAAT
GGAAGTCTGCCTTCATATCAGAAAACACAAGAAGAAGAGCCTCAGAAGAACTGCCAGTTACTTTTGAGGACAAAC
GGAAAGCCAACTATGAACGAGGAAACATGGAGCTGGAGAAGCGACGCCAAGTGTTGATGGAGCAGCAGCAGAGGGA
GGCTGAACGCAAAGCCCAGAAAGAGAAGGAAGAGTGGGAGCGGAAACAGAGAGAACTGCAAGAGCAAGAATGGAAG
AAGCAGCTGGAGTTGGAGAAACGCTTGGAGAAACAGAGAGAGCTGGAGAGACAGCGGGAGGAAGAGAGGAGAAAGG
AGATAGAAAGACGAGAGGCAGCAAAACAGGAGCTTGAGAGACAACGCCGTTTAGAATGGGAAAGACTCCGTGGCA
GGAGCTGCTCAGTCAGAAGACCAGGGAACAAGAAGACATTGTCAGGCTGAGCTCCAGAAAGAAAAGTCTCCACCTG
GAACTGGAAGCAGTGAATGGAAAACATCAGCAGATCTCAGGCAGACTACAAGATGTCCAAATCAGAAAGCAAACAC
AAAAGACTGAGCTAGAAGTTTTGGATAAACAGTGTGACCTGGAAATTATGGAAATCAAACAACCTTCAACAAGAGCT
TAAGGAATATCAAAATAAGCTTATCTATCTGGTCCCTGAGAAGCAGCTATTAACGAAAGAATTAACAAATGCAG
CTCAGTAACACACCTGATTGAGGGATCAGTTTACTTCATAAAAAGTCATCAGAAAAGGAAGAATTATGCCAAAGAC
TTAAAGAACAATTAGATGCTCTTGAAGAAAGAACTGCATCTAAGCTCTCAGAAATGGATTCAATTAACAATCAGCT
GAAGGAACTCAGAGAAAGCTATAATACACAGCAGTTAGCCCTTGAACAACCTTCATAAAATCAAACGTGACAAATTG
AAGGAAATCGAAAGAAAAAGATTAGAGCAAAAAAAAAAAAA

Fig. 2A

ATGGCAGTGACATTCACCATCATGGGAACCACTTCCCTTTTCTTCAGGATTCTCTGTAGTGGAAGAGAGCACCCA
GTGTTGGGCTGAAAACATCTGAAAGTAGGGAGAAGAACCTAAAATAATCAGTATCTCAGAGGGCTCTAAGGTGCCA
AGAAGTCTCACTGGACATTTAAGTGCCAACAAAGGCATACTTTCGGAATCGCCAAGTCAAAACTTTCTAACTTCTG
TCTCTCTCAGAGACAAGTGAGACTCAAGAGTCTACTGCTTTAGTGGCAACTACAGAAAAGTGGTGTTACCCAGAAA
AACAGGAGCAATTAGAAATGGTTCCAATATTTCAAAGCTCCGCAACAGGATGTGCTTTCCTTTGCCCATTTAGGG
TTTCTTCTCTTTCCTTTCTCTTTATTAACCACTA

Fig. 2B

ATATCTAGAAGTCTGGAGTGAGCAAACAAGAGCAAGAAACAAAAAGAAGCCAAAAGCAGAAGGCTCCAATATGAAC
AAGATAAATCTATCTTCAAAGACATATTAGAAGTTGGGAAAATAATTCATGTGAAGTAGACAAGTGTGTTAAGAGT
GATAAGTAAAATGCACGTGGAGACAAGTGCATCCCCAGATCTCAGGGACCTCCCCCTGCCTGTCACCTGGGGAGTG
AGAGGACAGGATAGTGCATGTTCTTTGTCTCTGAATTTTTAGTTATATGTGCTGTAATGTTGCTCTGAGGAAGCCC
CTGGAAAGTCTATCCCAACATATCCACATCTTATATTCCACAAATTAAGCTGTAGTATGTACCCTAAGACGCTGCT
AATTGACTGCCACTTCGCAACTCAGGGGCGGCTGCATTTTTAGTAATGGGTCAAATGATTCACCTTTTTATGATGCTT
CCAAAGGTGCCTTGGCTTCTCTTCCCAACTGACAAATGCCAAAGTTGAGAAAAATGATCATAATTTTAGCATAAAC
AGAGCAGTCGGCGACACCGATTTTATAAATAAACTGAGCACCTTCTTTTTAAACAAACAAATGCGGGTTTATTTCT
CAGATGATGTTTCATCCGTGAATGGTCCAGGGAAGGACCTTTACCTTGACTATATGGCATTATGTCATCACAAGCT
CTGAGGCTTCTCCTTTCCATCCTGCGTGGACAGCTAAGACCTCAGTTTTCAATAGCATCTAGAGCAGTGGGACTCA
GCTGGGGTGATTTGCCCCCATCTCCGGGGGAATGTCTGAAGACAATTTTGTACCTCAATGAGGGAGTGGAGGA
GGATACAGTGCTACTACCAACTAGTGGATAAAGGCCAGGGATGCTGCTCAACCTCCTACCATGTACAGGACGTCTC
CCCATTACAACCTACCCAATCCGAAGTGTCAACTGTGTCAGGACTAAGAAACCCTGGTTTTGAGTAGAAAAGGGCCT
GGAAAGAGGGGAGCCAACAAATCTGTCTGCTTCTCACATTAGTCATTGGCAAATAAGCATTCTGTCTCTTTGGCT
GCTGCCTCAGCACAGAGAGCCAGAACTCTATCGGGCACCAGGATAACATCTCTCAGTGAACAGAGTTGACAAGGCC
TATGGGAAATGCCTGATGGGATTATCTTCAGCTTGTTGAGCTTCTAAGTTTTCTTCCCTTCATTCTACCCTGCAAG
CCAAGTTCTGTAAGAGAAATGCCTGAGTTCTAGCTCAGGTTTTCTTACTCTGAATTTAGATCTCCAGACCCTTCT
GGCCACAATTCAAATTAAGGCAACAAACATATACCTTCCATGAAGCACACACAGACTTTTGAAAGCAAGGACAATG
ACTGCTTGAATTGAGGCCTTGAGGAATGAAGCTTTGAAGGAAAAGAATACTTTGTTTCCAGCCCCCTTCCCACT
CTTCATGTGTTAACCCTGCCTTCTGGACCTTGGAGCCACGGTGACTGTATTACATGTTGTTATAGAAAAGTAT
TTAGAGTTCTGATCGTTCAAGAGAATGATTAAATATACATTTCTA

Fig. 2C

Element Display										
Probe 1	Exp	Probe 2	Gene/Element	Plate/Well	Probe 1	S/B	A%	Probe 2	S/B	A%
384A Ovary T (mets)	+	272A Dendritic cells	422A0608 (420)	421G0196 (C:11)	2393	13.7	50	1430	2.0	50
335A Ovary T	-	S7 Ovary N	422D0626 (420)	421G0196 (C:11)	355	2.7	54	382	1.8	54
261A Ovary T	+	S10 Skeletal muscle N	42230621 (420)	421G0196 (C:11)	1298	6.9	51	707	1.9	51
264A Ovary T	+	S2 Pancreas N	422N0629 (420)	421G0196 (C:11)	9590	44.0	62	1180	2.3	62
386A Ovary T	-	S40 PBMC (activated)	422J0605 (420)	421G0196 (C:11)	516	3.8	50	618	2.0	50
265A Ovary T	+	CT5 Heart N	422O0624 (420)	421G0196 (C:11)	2305	14.8	53	489	2.2	53
S25 Ovary T	-	CT4 Bone Marrow N	422H0619 (420)	421G0196 (C:11)	531	3.5	53	743	2.0	53
383A Ovary T (mets)	+	I1 Colon N	422B0609 (420)	421G0196 (C:11)	1842	10.8	39	671	2.0	39
S22 Ovary T	-	CT9 Kidney N	42290627 (420)	421G0196 (C:11)	453	3.3	68	857	3.2	68
9485 OT 1-P (SCID)	+	9485 OT 5-P (SCID)	422Y0602 (420)	421G0196 (C:11)	1882	12.1	57	594	2.3	57
262A Ovary T	+	334A Large Intestine N	422A0622 (420)	421G0196 (C:11)	1486	7.5	55	965	2.2	55
S115 Ovary T (mets)	-	CT10 Small Intestine N	422C0604 (420)	421G0196 (C:11)	509	3.4	51	573	2.0	51
288A Ovary T	+	CT12 Lung N	422V0625 (420)	421G0196 (C:11)	700	4.5	54	651	2.1	54
201A Ovary T	-	S6 Stomach N	422W0620 (420)	421G0196 (C:11)	625	4.6	46	1335	3.6	46
S23 Ovary T	+	S56 Spinal Cord N	422G0628 (420)	421G0196 (C:11)	3888	22.1	50	502	2.2	50
205A Ovary T	+	270A Liver N	422Q0606 (420)	421G0196 (C:11)	2251	14.7	46	1256	2.0	46
9334 Ovary T (SCID)	-	I2 Skin N	422R0601 (420)	421G0196 (C:11)	552	3.4	72	1029	2.3	72
365A Ovary T	+	S91 Fetal tissue	422X0607 (420)	421G0196 (C:11)	8126	35.8	50	1449	2.0	50
263A Ovary T	-	S73 Breast N	422H0623 (420)	421G0196 (C:11)	439	3.2	61	1531	3.4	61
382A Ovary T	+	CT19 Brain N	422Q0610 (420)	421G0196 (C:11)	387	3.2	50	1278	2.1	50
266A Ovary T	+	S27 Ovary N	422S0603 (420)	421G0196 (C:11)	4242	22.1	58	883	2.0	58

Fig. 3

Title: COMPOSITIONS AND METHODS FOR THE THERAPY AND DIAGNOSIS OF OVARIAN CANCER

Inventors: Jennifer L. Mitcham et al. Ser. No. 09/636,801

Docket No. 210121.462C4 Express Mail No. EV020613020US

TCGAGCGGCCCGCCGGGCAGGTCCTTCAGACTTGGACTGTGTCACACTGCCAGGCTTCAGGGCTCCAACTTGCAG
ACGGCCTGTTGTGGGACAGTCTCTGTAATCGCGAAAGCAACCATGGAAGACCTGGGGGAAAACACCATGGTTTTAT
CCACCCTGAGATCTTTGAACAACCTCATCTCTCAGCGTGCGGAGGGAGGCTCTGGACTGGATATTTCTACCTCGGC
CGCGACCACGCT

Fig. 4

Title: COMPOSITIONS AND METHODS FOR THE THERAPY AND DIAGNOSIS OF OVARIAN CANCER

Inventors: Jennifer L. Mitcham et al. Ser. No. 09/636,801

Docket No. 210121.462C4 Express Mail No. EV020613020US

TAGCGYGGTCGCGGCCGAGGYCTGCTTYTCTGTCCAGCCCAGGGCCTGTGGGGTCAGGGCGGTGGGTGCAGATGGC
ATCCACTCCGGTGGCTTCCCCATCTTTCTCTGGCCTGAGCAAGGTCAGCCTGCAGCCAGAGTACAGAGGGCCAACA
CTGGTGTTCTTGAACAAGGGCCTTAGCAGGCCCTGAAGGRCCCTCTCTGTAGTGTTGAACTTCCTGGAGCCAGGCC
ACATGTTCTCCTCATACCGCAGGYTAGYGATGGTGAAGTTGAGGGTGAAATAGTATTMANGRAGATGGCTGGCARA
CCTGCCCCGGGCGGCCGCTCSAAATCC

Fig. 5

Title: COMPOSITIONS AND METHODS FOR THE THERAPY AND DIAGNOSIS OF OVARIAN CANCER

Inventors: Jennifer L. Mitcham et al. Ser. No. 09/636,801

Docket No. 210121.462C4 Express Mail No. EV020613020US

AGCGTGGTCGCGGCCGAGGTGTCCTTCAGGGTCTGCTTATGCCCTTGTTCAAGAACACCAGTGTGAGCTCTCTGTA
CTCTGGTTGCAGACTGACCTTGCTCAGGCCTGAGAAGGATGGGGCAGCCACCAGAGTGGATGCTGTCTGCACCCAT
CGTCCTGACCCCAAAGCCCTGGACTGGACAGAGAGCGGCTGTACTGGAAGCTGAGCCAGCTGACCCACGGCATCA
CTGAGCTGGGCCCCTACACCCTGGACAGGGACAGTCTCTATGTCAATGGTTTCACCCATCGGAGCTCTGTACCCAC
CACCAGCACCGGGGTGGTCAGCGAGGAGCCATTCAACCTGCCCGGGCGGCCGCTCGA

Fig. 6

Fig. 7A

TTGGGGNTTTGMAGCGGCCGCCCCGGGCAGGTACCGGGGTGGTCAGCGAGGAGCCATTACACTGAACTTCACCATC
AACAACTGCGGTATGAGGAGAACATGCAGCACCTGGCTCCAGGAAGTTCAACACCACGGAGAGGGTCCTTCAGG
GCCTGCTCAGGTCCCTGTTCAAGAGCACCAAGTGTGGCCCTCTGTACTCTGGCTGCAGACTGACTTTGCTCAGACT
TGAGAAACATGGGGCAGCCACTGGAGTGGACGCCATCTGCACCCTCCGCCTTGATCCCACTGGTCCTGGACTGGAC
AGAGAGCGGCTATACTGGGAGCTGAGCCAGTCCTCTGGCGGNGACNCCNCTT

Fig. 7B

AGCGTGGTCGCGGCCGAGGTCCAGTCGCAGCATGCTCTTTCTCCTGCCCCACTGGCACAGTGAGGAAGATCTCTGCT
GTCAGTGAGAAGGCTGTCATCCACTGAGATGGCAGTCAAAGTGCATTTAATACACCTAACGTATCGAACATCATA
GCTTGGCCCAGGTTATCTCATATGTGCTCAGAACACTTACAATAGCCTGCAGACCTGCCCCGGCGGCCGCTCGA

Fig. 7A and 7B

Title: COMPOSITIONS AND METHODS FOR THE THERAPY AND DIAGNOSIS OF OVARIAN CANCER

Inventors: Jennifer L. Mitcham et al. Ser. No. 09/636,801

Docket No. 210121.462C4 Express Mail No. EV020613020US

TGTGGTGTGAACTTCCTGGAGNCAGGGTGACCCATGTCCTCCCCATACTGCAGGTTGGTGATGGTGAAGTTGAGG
GTGAATGGTACCAGGAGAGGGCCAGCAGCCATAATTGTSGRGCKGSMGMSSGAGGMWGGWGTYYCWGAGGTTCYRA
RRTCCACTGTGGAGGTCCCAGGAGTGCTGGTGGTGGGCACAGAGSTCYGATGGGTGAAACCATTGACATAGAGACT
GTTCTGTCCAGGGGTGTAGGGGCCAGCTCTTYRATGYCATTGGYCAGTTKGCTYAGCTCCCAGTACAGCCRCTCT
CKGYYGMWCCAGSGCTTTTGGGGTCAAGATGATGGATGCAGATGGCATCCACTCCAGTGGCTGCTCCATCCTTCT
CGGACCTGAGAGAGGTGAGTCTGCAGCCAGAGTACAGAGGGCCAACACTGGTGTCTTTGAATA

Fig. 8

Title: COMPOSITIONS AND METHODS FOR THE THERAPY AND DIAGNOSIS OF OVARIAN CANCER

Inventors: Jennifer L. Mitcham et al. Ser. No. 09/636,801

Docket No. 210121.462C4 Express Mail No. EV020613020US

TCGAGCGGCCGCGGGCAGGTCAGGAAGCACATTGGTCTTAGAGCCACTGCCTCCTGGATTCCACCTGTGCTGCG
GACATCTCCAGGGAGTGCAGAAGGGAAGCAGGTCAAACCTGCTCAGATCAGTCAGACTGGCTGTTCTCAGTTCTCAC
CTGAGCAAGGTCAGTCTGCAGCCAGAGTACAGAGGGCCAACACTGGTGTTCCTTGAACAAGGGCTTGAGCAGACCCT
GCAGAACCTCTTCCGTGGTGTGAACTTCCTGGAAACCAGGGTGTTCATGTTTTCTCATAATGCAAGGTTGG
TGATGG

Fig. 9

Gene Name	Exp Name	Probe 1	Probe 2	GEM ID	Probe1 Value	Probe2 Value	Probe1 S/B	Probe1 A%	Probe2 S/B	Probe2 A%
42100188 (D3)	+7.0 205A Ovary T	42100188 (D3)	270A Liver N	422Q0606	8620	1240	57.7	65	2.2	65
42100188 (D3)	+5.9 523 Ovary T	42100188 (D3)	S56 Spinal Cord N	422G0628	5894	1002	35.3	89	3.9	89
42100188 (D3)	+5.7 385A Ovary T	42100188 (D3)	S91 Fetal tissue	422X0607	12151	2121	54.3	73	2.8	73
42100188 (D3)	+5.1 426A Ovary T (met)	42100188 (D3)	415A Aorta N	422X0611	7487	1480	53.0	73	9.7	73
42100188 (D3)	+3.5 263A Ovary T	42100188 (D3)	S73 Breast N	422H0623	7302	2116	39.2	84	4.5	84
42100188 (D3)	+3.3 383A Ovary T (met)	42100188 (D3)	I1 Colon N	422B0609	3714	1113	20.4	83	2.6	83
42100188 (D3)	+3.0 933A Ovary T (SCID)	42100188 (D3)	I2 Skin N	422R0601	2435	814	12.1	75	2.1	75
42100188 (D3)	+2.6 384A Ovary T (met)	42100188 (D3)	272A Dendritic cell	42240608	4578	1754	25.0	69	2.3	69
42100188 (D3)	+2.2 264A Ovary T	42100188 (D3)	S2 Pancreas N	422N0629	7904	3596	38.5	81	5.6	81
42100188 (D3)	+2.0 386A Ovary T	42100188 (D3)	S40 PR MC (activat)	422J0605	2191	1081	14.0	90	2.9	90
42100188 (D3)	+2.0 5115 Ovary T (met)	42100188 (D3)	CT10 Small intestine	422C0604	1979	971	10.4	80	2.7	80
42100188 (D3)	+2.0 265A Ovary T	42100188 (D3)	CT5 Heart N	422O0624	1911	964	13.9	93	3.4	93
42100188 (D3)	+2.0 335A Ovary T	42100188 (D3)	S7 Ovary N	42220626	1660	817	9.8	100	3.0	100
42100188 (D3)	-1.9 428A Ovary T (met)	42100188 (D3)	243A Esophagus N	42240612	1827	3480	13.4	97	9.5	97
42100188 (D3)	+1.6 261A Ovary T	42100188 (D3)	S10 Skeletal muscle	42230621	5914	3653	30.4	86	6.0	86
42100188 (D3)	+1.6 266A Ovary T	42100188 (D3)	S27 Ovary N	42250603	2039	1274	11.9	50	2.6	50
42100188 (D3)	+1.6 S22 Ovary T	42100188 (D3)	CT9 Kidney N	42290627	1736	1072	11.0	92	4.0	92
42100188 (D3)	+1.4 9485 OT 1-P (SCID)	42100188 (D3)	9485 OT 5-P (SCID)	422Y0602	4204	3074	23.0	93	7.7	93
42100188 (D3)	+1.4 262A Ovary T	42100188 (D3)	334A Large Intestine	422A0622	3002	2101	16.6	89	4.0	89
42100188 (D3)	+1.3 S25 Ovary T	42100188 (D3)	CT4 Bone Marrow	422H0619	1643	1297	9.6	90	3.1	90
42100188 (D3)	+1.2 429A Ovary T (met)	42100188 (D3)	364A Ovary N	422I0614	2521	2084	22.0	65	2.9	65
42100188 (D3)	+1.2 382A Ovary T	42100188 (D3)	CT19 Brain N	422Q0610	2072	1663	10.9	88	2.3	88
42100188 (D3)	+1.2 288A Ovary T	42100188 (D3)	CT12 Lung N	422V0625	1840	1473	10.7	87	3.8	87
42100188 (D3)	+1.1 201A Ovary T	42100188 (D3)	S6 Stomach N	422W0620	1329	1204	9.1	90	3.5	90

Fig. 10

Gene Name	Probe 1 Exp. Name	Probe 2 P1 P2 Name	Gene ID	Probe1 Value	Probe2 Value	Probe1 S/B	Probe1 A%	Probe2 S/B	Probe2 A%
421B0181 (C3)	+18.8 385A Ovary T	S91 Fetal tissue	422X0607	26711	1424	103.3	54	2.0	54
421B0181 (C3)	+11.5 523 Ovary T	S56 Spinal Cord N	422G0628	13559	1179	65.3	68	3.9	68
421B0181 (C3)	+11.1 426A Ovary T (mets)	415A Aorta N	422X0611	14125	1273	67.3	61	5.6	61
421B0181 (C3)	+10.8 205A Ovary T	270A Liver N	422Q0606	16121	1488	93.1	43	2.3	43
421B0181 (C3)	+5.1 263A Ovary T	S73 Breast N	422H0623	11326	2235	58.2	68	4.4	68
421B0181 (C3)	+4.6 384A Ovary T (mets)	272A Dendritic cells	422A0608	6583	1424	24.5	40	2.1	40
421B0181 (C3)	+4.4 264A Ovary T	S2 Pancreas N	422N0629	9865	2245	40.9	64	3.6	64
421B0181 (C3)	+4.4 429A Ovary T (mets)	364A Ovary N	422I0614	2803	638	22.6	60	7.4	60
421B0181 (C3)	+4.2 261A Ovary T	S10 Skeletal muscle	422J0621	8271	1949	39.5	68	3.6	68
421B0181 (C3)	+3.8 S115 Ovary T (mets)	CT10 Small intestine	422C0604	2281	607	11.6	60	2.1	60
421B0181 (C3)	+2.5 265A Ovary T	CT5 Heart N	422O0624	3192	1293	19.2	68	4.0	68
421B0181 (C3)	-2.3 S22 Ovary T	CT9 Kidney N	422N0627	565	1276	3.6	70	3.9	70
421B0181 (C3)	+2.2 266A Ovary T	S27 Ovary N	422S0603	2774	1260	14.3	46	2.7	46
421B0181 (C3)	+2.1 933A Ovary T (SCID)	12 Skin N	422R0601	1774	837	8.4	56	2.1	56
421B0181 (C3)	+1.9 9485 OT-1-P (SCID)	9485 OT-1-P (SCID)	422Y0602	6967	3726	41.5	70	9.2	70
421B0181 (C3)	+1.6 382A Ovary T	CT19 Brain N	422Q0610	2313	1471	6.2	50	1.9	50
421B0181 (C3)	+1.6 288A Ovary T	CT12 Lung N	422V0625	1657	1054	9.7	69	2.9	69
421B0181 (C3)	-1.5 S25 Ovary T	CT4 Bone Marrow N	422H0619	848	1243	4.5	65	2.7	65
421B0181 (C3)	+1.4 262A Ovary T	S34A Large Intestine	422A0622	3171	2214	16.8	69	3.8	69
421B0181 (C3)	+1.2 386A Ovary T	S40 PBMC (activated)	422I0605	630	544	4.2	53	1.9	53
421B0181 (C3)	-1.2 335A Ovary T	S7 Ovary N	422J0626	592	730	3.7	75	2.6	75
421B0181 (C3)	-1.0 201A Ovary T	S6 Stomach N	422W0620	1197	1237	7.8	65	3.5	65
421B0181 (C3)	-1.0 428A Ovary T (mets)	243A Esophagus N	422A0612	783	797	4.5	95	2.4	95
421B0181 (C3)	383A Ovary T (mets)	11 Colon N	422B0609	3470	862	8.9	24	1.7	24

Fig. 11

Gene Name	Exp Name	Probe 1	Probe 2	GEM ID	Probe1 Value	Probe2 Value	Probe1 S/B	Probe1 A%	Probe2 S/B	Probe2 A%
42110182 (H7)	+16.7 426A Ovary T (met)	415A Aorta N	422X0611	422X0611	7706	462	46.3	75	3.5	75
42110182 (H7)	+10.7 205A Ovary T	270A Liver N	422X0606	422X0606	10171	950	61.2	41	1.8	41
42110182 (H7)	+9.9 385A Ovary T	S91 Fetal tissue	422X0607	422X0607	14415	1459	62.1	48	2.2	48
42110182 (H7)	+8.8 S23 Ovary T	S56 Spinal Cord N	422H0628	422H0628	7781	880	47.3	73	3.4	73
42110182 (H7)	+6.4 383A Ovary T (met)	11 Colon N	422B0609	422B0609	4807	748	27.6	47	2.2	47
42110182 (H7)	+5.1 263A Ovary T	S73 Breast N	422H0623	422H0623	9815	1909	57.1	74	4.2	74
42110182 (H7)	+4.9 429A Ovary T (met)	364A Ovary N	422H0614	422H0614	2661	543	20.3	61	6.7	61
42110182 (H7)	+3.5 264A Ovary T	S2 Pancreas N	422N0629	422N0629	7934	2274	38.8	71	3.9	71
42110182 (H7)	-2.9 S25 Ovary T	CT4 Bone Marrow	422H0619	422H0619	480	1375	3.5	80	3.0	80
42110182 (H7)	+2.8 261A Ovary T	S10 Skeletal muscle	422C0621	422C0621	8993	3245	34.6	69	5.1	69
42110182 (H7)	+2.5 S115 Ovary T (met)	CT10 Small intestine	422C0604	422C0604	1864	738	8.1	67	2.2	67
42110182 (H7)	+2.3 9334 Ovary T (SCII)	12 Skin N	422R0601	422R0601	2552	1113	12.7	41	2.6	41
42110182 (H7)	-2.3 S23 Ovary T	CT19 Kidney N	422N0627	422N0627	386	889	3.2	69	3.4	69
42110182 (H7)	+2.2 384A Ovary T (met)	272A Dendritic cell	422A0608	422A0608	3516	1567	18.7	55	2.2	55
42110182 (H7)	-2.2 382A Ovary T	CT19 Brain N	422Q0610	422Q0610	608	1320	4.2	60	2.3	60
42110182 (H7)	+1.9 265A Ovary T	CT5 Heart N	422O0624	422O0624	2063	1080	13.6	87	3.5	87
42110182 (H7)	+1.8 266A Ovary T	S27 Ovary N	422S0603	422S0603	1550	847	7.0	58	2.1	58
42110182 (H7)	+1.5 262A Ovary T	334A Large Intestine	422A0622	422A0622	2559	1651	13.2	73	3.2	73
42110182 (H7)	-1.4 386A Ovary T	S40 PB MC (activa)	422I0605	422I0605	534	738	3.9	62	2.2	62
42110182 (H7)	-1.3 288A Ovary T	CT12 Lung N	422V0625	422V0625	893	1120	5.3	66	3.1	66
42110182 (H7)	-1.3 335A Ovary T	S7 Ovary N	422Z0626	422Z0626	440	567	3.3	60	2.2	60
42110182 (H7)	+1.2 9485 OT 1-P (SCID)	9485 OT 5-P (SCID)	422Y0602	422Y0602	4188	3529	21.6	66	9.5	66
42110182 (H7)	+1.1 428A Ovary T (met)	243A Esophagus N	422A0612	422A0612	725	689	6.2	65	2.8	65
42110182 (H7)	-1.0 201A Ovary T	S6 Stomach N	422W0620	422W0620	1008	1018	7.4	62	3.2	62

Fig. 12

Gene Name	Exp Name	Probe 1	Probe 2	GEM ID	Probe1 Value	Probe2 Value	Probe1 S/B	Probe1 A%	Probe2 S/B	Probe2 A%
421V0189 (D1)	+33.2 426A Ovary T (met)	415A Aorta N	422X0611	8072	243	55.2	67	2.4	67	67
421V0189 (D1)	+13.7 S23 Ovary T	S56 Spinal Cord N	422Q0628	7367	537	42.6	69	2.5	69	69
421V0189 (D1)	+12.6 429A Ovary T (met)	364A Ovary N	422I0614	2850	227	21.7	64	3.5	64	64
421V0189 (D1)	+8.0 385A Ovary T	S91 Fetal tissue	422X0607	11711	1469	54.0	58	2.2	58	58
421V0189 (D1)	+7.3 263A Ovary T	S73 Breast N	422H0623	6949	952	37.8	69	2.6	69	69
421V0189 (D1)	-5.8 S25 Ovary T	CT4 Bone Marrow	422H0619	208	1210	2.1	44	2.9	44	44
421V0189 (D1)	+5.0 205A Ovary T	270A Liver N	422Q0606	8676	1937	52.3	57	2.6	57	57
421V0189 (D1)	+4.5 383A Ovary T (met)	11 Colon N	422B0609	3149	707	17.4	57	2.0	57	57
421V0189 (D1)	+4.4 261A Ovary T	S10 Skeletal muscle	422J0621	6332	1443	29.1	77	2.9	77	77
421V0189 (D1)	+4.2 264A Ovary T	S2 Pituitary N	422N0629	7612	1809	38.1	79	3.3	79	79
421V0189 (D1)	-3.2 382A Ovary T	GT19 Brain N	422Q0610	468	1508	3.4	60	2.3	60	60
421V0189 (D1)	+2.9 9334 Ovary T (SCID)	12 Skin N	422R0601	2500	860	12.3	51	2.1	51	51
421V0189 (D1)	+2.5 S115 Ovary T (met)	GT10 Small intestine	422C0604	1424	569	6.7	61	2.1	61	61
421V0189 (D1)	+2.4 265A Ovary T	GT5 Heart N	422Q0624	1742	723	11.8	70	2.8	70	70
421V0189 (D1)	+2.3 384A Ovary T (met)	272A Dendritic cell	42240608	3083	1342	17.0	62	2.0	62	62
421V0189 (D1)	+1.9 266A Ovary T	S27 Ovary N	42250603	1370	732	8.0	47	2.0	47	47
421V0189 (D1)	-1.9 386A Ovary T	S40 PBMC (activated)	422J0605	307	580	2.6	41	2.0	41	41
421V0189 (D1)	+1.7 262A Ovary T	334A Large Intestine	422A0622	2097	1202	11.2	86	2.7	86	86
421V0189 (D1)	-1.3 335A Ovary T	S7 Ovary N	42220626	373	470	2.9	47	2.0	47	47
421V0189 (D1)	-1.1 288A Ovary T	CT12 Lung N	422V0625	969	1094	5.6	72	2.9	72	72
421V0189 (D1)	+1.1 201A Ovary T	S6 Stomach N	422W0620	750	672	5.6	62	2.4	62	62
421V0189 (D1)	+1.1 428A Ovary T (met)	243A Esophagus N	42240612	498	446	4.2	73	2.1	73	73
421V0189 (D1)	-1.0 9485 OT 1-P (SCID)	9485 OT 5-P (SCID)	422Y0602	3117	3174	16.7	91	8.2	91	91
421V0189 (D1)	S22 Ovary T	GT9 Kidney N	42290627	224	409	2.3	48	2.3	48	48

Fig. 13

Gene Name	Exp	Probe 1	Probe 2	GEM ID	Probe1 Value	Probe2 Value	Probe1 S/B	Probe1 A%	Probe2 S/B	Probe2 A%
421H0187 (E11)	+20.2	426A Ovary T (met)	415A Aorta N	422X0611	5441	270	36.3	50	2.3	50
421H0187 (E11)	+10.0	S23 Ovary T	S56 Spinal Cord N	422C0628	5318	533	27.1	56	2.3	56
421H0187 (E11)	+8.3	429A Ovary T (met)	364A Ovary N	422I0614	1252	150	10.1	58	2.5	58
421H0187 (E11)	+5.7	385A Ovary T	S91 Fetal tissue	422X0607	9507	1668	35.8	45	2.1	45
421H0187 (E11)	+4.4	205A Ovary T	270A Liver N	422Q0606	5456	1235	31.1	50	2.0	50
421H0187 (E11)	+4.2	265A Ovary T	CTS Heart N	422O0624	1834	438	11.9	48	2.0	48
421H0187 (E11)	-4.1	382A Ovary T	CT19 Brain N	422Q0610	309	1259	2.6	48	2.0	48
421H0187 (E11)	+3.6	261A Ovary T	S10 Skeletal muscle	42230621	3733	1036	17.7	55	2.3	55
421H0187 (E11)	+3.4	263A Ovary T	S73 Breast N	422H0623	4163	1239	23.0	62	3.0	62
421H0187 (E11)	+2.5	S115 Ovary T (met)	CT10 Small intestine	422C0604	1565	627	8.8	47	2.1	47
421H0187 (E11)	+2.1	264A Ovary T	S2 Pancreas N	422N0629	3455	1630	14.9	60	3.0	60
421H0187 (E11)	+2.1	384A Ovary T (met)	272A Dendritic cell	42240608	2667	1270	13.4	44	1.9	44
421H0187 (E11)	-2.1	S22 Ovary T	CT9 Kidney N	42290627	291	605	2.4	51	2.5	51
421H0187 (E11)	-1.7	386A Ovary T	S40 PBMC (activated)	422J0605	410	687	3.2	47	2.0	47
421H0187 (E11)	+1.6	933A Ovary T (SCII)	12 Skin N	422R0601	1622	984	7.9	44	2.2	44
421H0187 (E11)	+1.5	262A Ovary T	334A Large Intestine	422A0622	1892	1245	10.1	50	2.6	50
421H0187 (E11)	-1.5	288A Ovary T	CT12 Lung N	422V0625	604	908	4.1	62	2.6	62
421H0187 (E11)	-1.4	428A Ovary T (met)	243A Esophagus	42240612	236	325	2.7	78	1.9	78
421H0187 (E11)	-1.3	335A Ovary T	S7 Ovary N	42220626	382	501	2.9	58	2.0	58
421H0187 (E11)	-1.2	201A Ovary T	S6 Stomach N	422W0620	558	677	4.2	58	2.3	58
421H0187 (E11)	+1.0	9485 OT 1-P (SCID)	9485 OT 5-P (SCID)	422Y0602	2582	2493	15.1	57	6.3	57
421H0187 (E11)		383A Ovary T (met)	11 Colon N	422B0609	2261	502	12.5	38	1.7	38
421H0187 (E11)		266A Ovary T	S27 Ovary N	42250603	1739	965	9.7	36	2.2	36
421H0187 (E11)		S25 Ovary T	CT4 Bone Marrow	422H0619	283	845	2.2	44	2.2	44

Fig. 14

11721-1

ACGGTTTCAATGGACACTTTTATTGTTTACTTAATGGATCATCAATTTTGTCTCACTACCTACAAATGGAATTTCA
TCTTGTTTCCATGCTGAGTAGTGAAACAGTGACAAAGCTAATCATAATAACCTACATCAAAAGAGAACTAAGCTAA
CACTGCTCACTTTCTTTTAAACAGGCAAAATATAATATATGCACTCTAXAATGCACAATGGTTTAGTCACTAAAA
AATTCAAATGGGATCTTGAAGAATGTATGCAAATCCAGGGTGCAGTGAAGATGAGCTGAGATGCTGTGCAACTGTT
TAAGGGTTCCTGGCACTGCATCTCTTGGCCACTAGCTGAATCTTGACATGGAAGGTTTTAGCTAATGCCAAGTGGA
GATGCAGAAAATGCTAAGTTGACTTAGGGGCTGTGCACAGGAATAAAAGGCAGGAAAGTACTAAATATTGCTGAG
AGCATCCACCCAGGAAGGACTTTACCTTCAGGAGCTCCAACTGGCACCACCCCACTGCTCACATGGCTGACT
TTATCCTCCGTGTTCCATTTGGCACAGCAAGTGGCAGT

11721-2

AAGGCTGGTGGGTTTTTATCCTGCTGGAGAACCTCCGCTTTCATGTGGAGGAAGAAGGGAAGGGAAGATGCTT
CTGGGAACAAGGTTAAAGCCGAGCCAGCCAAAATAGAAGCTTTCGAGCTTCACTTTCCAAGCTAGGGGATGTCTA
TGTCATGATGCTTTTGGCACTGCTCACAGAGCCACAGCTCCATGGTAGGAGTCAATCTGCCACAGAAGGCTGGT
GGGTTTTTATGAAGAAGGAGCTGAATACTTTGCAAAGGCCTTGAGAGCCAGAGCGACCTTCTTGCCATCC
TGGGCGGAGCTAAAGTTGCAGACAAGATCCAGCTCATCAATAATATGCTGGACAAAGTCAATGAGATGATTATTGG
TGGTGAATGGCTTTTACCTTCCTAAGGTGCTCAACAACATGGAGATTGGCACTTCTCTGTTTGATGAAGAGGGA
GCCAAGATTGTCAAAGACCTAATGTCAAAGCTGAGAAGAATGGTGTGAAGATTACCTTGCTGTTGACTTTGTCA
CTGCTGACAAGTTTGATGA

11724-1

TTTGTTCTTACATTTTTCTAAAGAGTTACTTAAATCAGTCAACTGGTCTTTGAGACTCTTAAGTTCTGATTCCAA
CTTAGCTAATTCATTCTGAGAACTGTGGTATAGGTGGCGTGTCTCTTCTAGCTGGGACAAAAGTTCTTTGTTTTCC
CCCTGTAGAGTATCACAGACCTTCTGCTGAAGCTGGACCTCTGTCTGGGCCCTTGACTCCCAATCTGCTTGTCTAT
GTTCAAGCCTGGAAATGTTAATCTTTAATCTTCCATATGGATGGACATCTGTCTAAGTTGATCTTTAGAACACT
GCAATTATCTTCTTTGAGTCTAATTTCTTCTTCTTTGCTTTGAATCGCATCACTAACTTCTCTCCCATTTCTTA
GCTTCATCTATCACCTGTACGATCATCTGGAGGGAAGACATGCTCTTAGTAAAGGCTGCAAGCTGGGTACAG
TACTGTCCAAGTTTTCTGAAGTTGCTGAACCTTCTTGTCTTTCTTGTTCAAAGTAACCTGAATCTCTCCAATTGT
CTCTTCCAAGTGGACTTTTTCTCTGCGCAAAGCATCCAG

11724-2

TCATTGCCTGTGATGGCATCTGGAATGTGATGAGCAGCCAGGAAGTTGTAGATTTCAATCAATCAAAGGATTTCAGC
ATGTGGTGGAAAGCTGTGAGGCAAGAGAAACAAGAACTGTATGGCAAGTTAAGAAGCACAGAGGCAAACAAGAAGGA
GACAGAAAAGCAGTTGCAGGAAGCTGAGCAAGAAATGGAGGAAATGAAAGAAAAGATGAGAAAAGTTTGCTAAATCT
AAACAGCAGAAAATCCTAGAGCTGGAAGAAGAGAATGACCGGCTTAGGGCAGAGGTGCACCCTGCAGGAGATACAG
CTAAAGAGTGTATGGAACACTTCTTTCTTCCAATGCCAGCATGAAGGAAGAACTTGAAAGGGTCAAATGGAGTA
TGAAACCTTTCTAAGAAGTTTCAGTCTTTAATGTCTGAGAAAGACTCTCTAAGTGAAGAGGTTCAAGATTTAAAG
CATCAGATAGAAGGTAATGTATCTAAACAAGCTAACCTAGAGGCCACCGAGAAACATGATAACCAAACGAATGTCA
CTGAAGAGGGAACACAGTCTATACCAGGT

Fig. 15A

AAGCCAATAATCACCATTTATTACTTAAATATATGCCAACCACTGTACTTGGCAGTTCACAAATTCTCACC GTTACA
ACAACCCCATGAGGTATTTATTCCCATTTCTATAGATAGGGAAACCACAGCTCAAGTAAGTTAGGAAACTGAGCCAA
GTATACACAGAATACGAAGTGGCAAAACTAGAAGGAAAGACTGACACTGCTATCTGCTGGCCTCCAGTGTCTTGCC
TCTTTTCACACGGGtTCAATGTCTCCAGCGCTGCTGCTGCTGCTGCATTACCATGCCCTCATTGTTTTTCTTCCTC
TGGTGTTCAACTGCATCCTTCAAAGAATCTAACTCATTCCAGAGACCACTTATTTCTTCTCTTTCTGAAATTA
CTTTTAATAATTCTTCATGAGGGGGAAAAGAAGATGCCTGTTGGTAGTTTTGTTGTTTAAGCTGCTCAATTTGGGA
CTTAAACAATTTGTTTTCATCTTGTACATCCTGTAACAGCTGTGTTTTGCTAGAAAGATCACTCTCCCTCTCTTT
AGCATGGCTTCTAACCTCTTCAATTCATTTTCTTTTCTTCAACACAATCTCAAGTTCCTCAAACCTGTGATGCAG
AAGAGGCCTCTTTCAAGTTATGTTGTGCTACTTCCTGAACATGTGCTTTTAAAGATTCATTTTCTTCTTGAAGATC
CTGTAACCACTTCCCTGTATTGGCTAGGTCTTTCTCTTTCTTCCAAAACAGCCTTCATGGTATTCATCTGTTCC
TCTTTTCTTTTAATAAGTTCAGGAGCTTCAGAAC

CAAGCTTTTTTTTTTTTTTIAAAAAGTGTTAGCATTAAATGTTTTATTGTACGCAGATGGCAACTGGGTTTATGTC
TTCATATTTTATATTTTGTAAATTAATAAATTACAAGTTTTAAATAGCCAATGGCTGGTTATATTTTTCAGAAAA
CATGATTAGACTAATTCATTAATGGTGGCTTCAAGCTTTTCTTATTGGCTCCAGAAAATTACCCACCTTTTGTCT
CTTCTTAAAAAACTGGAATGTTGGCATGCATTTGACTTCACACTCTGAAGCAACATCCTGACAGTCATCCACATC
TACTTCAAGGAATATCACGTTGGAATACTTTTCAGAGAGGGAATGAAAGAAAGGCTTGATCATTTTGCAGGCCCCA
CACCACGTGGCTGAGAAGTCAACTACTACAAGTTATCACCTGCAGCGTCCAAGGCTTCTGAAAAGCAGTCTTGC
TCTCGATCTGCTTACCATCTTGGCTGCTGGAGTCTGACGAGCGGCTGTAAGGACCGATGGAAATGGATCCAAAGC
ACCAAACAGAGCTTCAAGACTCGCTGCTTGGCTTGAATTCGGATCCGATATCGCCATGGCCT

AAGTGTTAGCATTAAATGTTTTATTGTCACGCAGATGGCAACTGGGTTTATGTCTTCATATTTTATATTTTTGTAA
TTAAAAAATTMCAAGTTTTAAATAGCCAATGGCTGGTTATATTTTCAGAAAACATGATTAGACTAATTCATTAAT
GGTGGCTTCAAGCTTTTCCTTATTGGCTCCAGAAAATTCACCCACCTTTTGCCCTTCTTAAAAAACTGGAATGTT
GGCATGCATTTGACTTCACACTCTGAAGCAACATCCTGACAGTCATCCACATCTACTTCAAGGAATATCACGTTGG
AATACTTTTCAGAGAGGGAATGAAAGAAAGGCTTGATCATTTTGCAAGGCCACACCACGTGGCTGAGAAGTCAAC
TACTACAAGTTTATCACCTGCAGCGTCCAAGGCTTCCTGAAAAGCAGTCTTGCTCTCGATCTGCTTCACCATCTTG
GCTGCTGGAGTCTGACGAGCGGCTGTAAGGACCGATGGAAATGGATCCAAAGCACCAACAGAGCTTCAAGACTCG
CTGCTTGGCATGAATTCGGATCCGA

Fig. 15B

11728.1.40.19.19

TACAAACTTTATTGAAACGCACACGCGCACACACACAAACACCCCTGTGGATAGGGAAAAGCACCTGGCCACAGGG
TCCACTGAAACGGGGAGGGGATGGCAGCTTGTAATGTGGCTTTTGCCACAACCCCTTCTGACAGGGAAGGCCTTA
GATTGAGGCCCCACCTCCCATGGTGATGGGGAGCTCAGAATGGGGTCCAGGGAGAATTTGGTTAGGGGGAGGTGCT
AGGGAGGCATGAGCAGAGGGCACCCCTCCGAGTGGGGTCCCGAGGGCTGCAGAGTCTTCAGTACTGTCCCTCACAGC
AGCTGTCTCAAGGCTGGGTCCCTCAAAGGGGCGTCCAGCGCGGGGCTCCCTGCGCAAACACTTGGTACCCCTGG
CTGCGCAGCGGAAGCCAGCAGGACAGCAGTGGCGCCGATCAGCACAACAGACGCCCTGGCGGTAGGGACAGCAGGC
CCAGCCCTGTCGGTTGTCTCGGCAGCAGGTCTGGTTATCATGGCAGAAGTGTCTTCCACACTTCACGTCCTTCA
CACCCACGTGAXGGCTACXGGCCAGGAAG

11728.2.40.19.19

CCCGTGGGTGCCATCCACGGAGTTGTTACCTGATCTTTGGAAGCAGGATCGCCCGTCTGCACTGCAGTGGAAGCCC
CGTGGGCAGCAGTGATGGCCATCCCCGCATGCCACGGCCTCTGGGAAGGGGCAGCAACTGGAAGTCCCTGAGACGG
TAAAGATGCAGGAGTGGCCGGCAGAGCAGTGGGCATCAACCTGGCAGGGGCCACCCAGATGCCTGCTCAGTGTTGT
GGGCCATTTGTCCAGAAGGGGACGGCAGCAGCTGTAGCTGGCTCCTCCGGGGTCCAGGCAGCAGGCCACAGGGCAG
AACTGACCATCTGGGCACCGCGTTCCAGCCACCAGCCCTGCTGTAAAGGCCACCCAGCTCACCAGGGTCCACATGG
TCTGCCTGCGTCCGACTCCGCGGTCTTGGGCCCTGATGGTTCTACCTGCTGTGAGCTGCCAGTGGGAAGTATGG
CTGCTGCCAATGCCAACGCCACCTGCTGCTCCGATCACCTGCACTGCTGCCCCAAGACACTGTGTGTGACCTGAT
CCAGAGTAAGTGCCTCTCCAAGGAGAACG

11730-1

GAATCACCTTTCTGGTTTAGCTAGTACTTTGTACAGAACAAATGAGGTTTCCCACAGCGGAGTCTCCCTGGGCTCTG
TTTGGCTCTCGGTAAGGCAGGCCTACACCTTTTCTCTCTCTATGGAGAGGGGAATATGCATTAAGGTGAAAAGT
CACCTTCCAAAAGTGAGAAAAGGGATTGATTGCTGCTTCAGGACTGTGGAATTATTTGGAATGTTTTACAAATGGT
TGCTACAAAACAACAAAAAAGGTAATTACAAAATGTGTACATCACAAATGCTTTTTAAAGACATTATGCATTGTG
CTCACATTCCCTTAAATGTTGTTTCCAAAGGTGCTCAGCCTCTAGCCCAGCTGGATTCTCCGGGAAGAGGCAGAGA
CAGTTTGGCGAAAAAGACACAGGGAAGGAGGGGGTGGTGAAAGGAGAAAGCAGCCTTCCAGTTAAAGATCAGCCCT
CAGTTAAAGGTCAGCTTCCCGCAXGCTGGCCTCAXGCGGAGTCTGGGTGAGAGGGAGGAGCAGCAGCAGGGTGGGA
CTGGGGCGT

11730-2

AACCGGAGCGCGAGCAGTAGCTGGGTGGGCACCATGGCTGGGATCACCACCATCGAGGCGGTGAAGCGCAAGATCC
AGGTTCTGCAGCAGCAGGCAGATGATGCAGAGGAGCGAGCTGAGCGCCTCCAGCGAGAAGTTGAGGGAGAAAGGCG
GGCCCGGGAACAGGCTGAGGCTGAGGTGGCCTCCTTGAACCGTAGGATCCAGCTGGTTGAAGAAGAGCTGGACCGT
GCTCAGGAGCGCCTGGCCACTGCCCTGCAAAAGCTGGAAGAAGCTGAAAAAGCTGCTGATGAGAGTGAGAGAGGTA
TGAAGGTTATTGAAAACCGGGCCTTAAAAGATGAAGAAAAGATGGAACCTCCAGGAAATCCAACCTCAAAGAAGCTAA
GCACATTGCAGAAGAGGCAGATAGGAAGTATGAAGAGGTGGCTCGTAAGTTGGTGATCATTGAAGGAGACTTGAA
CGCACAGAGGAACGAGCTGAGCTGGCAGAGTCCCGTTGCCGAGAGATGGATGAGCAGATTAGACTGATGGACCAGA
ACCTGAAGTGTCTGAGTGC

Fig. 15C

11732.1contig

GAGAACTTGGCCTTTATTGTGGGCCAGGAGGGCACAAAGGTCAGGAGGCCCAAGGGAGGGATCTGGTTTTCTGGA
TAGCCAGGTCATAGCATGGGTATCAGTAGGAATCCGCTGTAGCTGCACAGGCCTCACTTGCTGCAGTTCGGGGAG
AACACCTGCACTGCATGGCGTTGATGACCTCGTGGTACACGACAGAGCCATTGGTGCAGTGAAGGGCACGCGCAT
GGGCTCCGTCCTCGAGGGCAGGCAGCAGGAGCATTGCTCCTGCACATCCTCGATGTCAATGGAGTACACAGCTTTG
CTGGCACACTTTCCCTGGCAGTAATGAATGTCCACTTCCTCTTGGGACTTACAATCTCCCACTTTGATGTACTGCA
CCTTGGCTGTGATGTCTTTGCAATCAGGCTCCTCACATGTGTACAGCAGGTGCCTGGAATTTTACGATTTTGCC
TCCTTCAGCCAGACACTTGTGTTTCATCAAATGGTGGGCAGCCCGTGACCCTCTTCTCCAGATGTACTCTCCTCT

11732.2contig

GCCTGGACCTTGCCGGATCAGTGCCACACAGTGACTTGCTTGGCAAATGGCCAGACCTTGCTGCAGAGTCATCGTG
TCAATTGTGACCATGGACCCCGGCCTTCATGTGCCAACAGCCAGTCTCCTGTTCCGGGTGGAGGAGACGTGTGGCTG
CCGCTGGACCTGCCCTTGTGTGTGCACGGGCAGTTCCTCGGCACATCGTCACCTTCGATGGGCAGAATTTCAAG
CTTACTGGTAGCTGCTCCTATGTCATCTTTCAAACAAGGAGCAGGACCTGGAAGTGCTCCTCCACAATGGGGCT
GCAGCCCCGGGGCAAACAAGCCTGCATGAAGTCCATTGAGATTAAGCATGCTGGCGTCTCTGCTGAGCTGCACAG
TAACATGGAGATGGCAGTGGATGGGAGACTGGTCCTTGCCCCGTACGTTGGTGAAAACATGGAAGTCAGCATCTAC
GGCGCTATCATGTATGAAGTCAGGTTTACCCATCTTGCCACATCCTCACATACACCGCCXCAAACAACGAGTT

11735-1-2

AGATCAACCTCTGCTGGTCAGGAGGAATGCCTTCCTTGTCTTGATCTTTGCTTTGACGTTCTCGATAGTRWCAaC
TKKRYTSRAMSKMAAGKGYRATGRWMTTKSYWGWRSYKTMWWMRSGRARAYTTaGaCAYCCCMCCTCWgAGaCGS
AGKACCARGTGCAgAgGTGGACTCTTTCTGGATGTTGTAGTCAGACAGGGTGCGTCCATCTTCCAGCTGTTTCCCA
GCAAAGATCAACCTCTGCTGATCAGGAGGGATGCCTTCCTTATCTTGGATCTTTGCCTTGACATTCTCGATGGTGT
CACTGGGCTCCACCTCGAGGGTGATGGTCTTACCAGTCAGGGTCTTCACGAAGATYTGATCCCACCTCTGAGACG
GAGCACCAGGTGCAGGGTRGACTCTTTCTGGATGTTGTAGTCAGACAGGGTGCGYCCATCTTCCAGCTGcTTTCCS
aGCAAAGATCAACCTCTGCTGGTCAGGAGGRATGCCTTCCTTGTCTTGATCTTTGCTTTGACRTTCTCRATGGTG
TCACTCGGCTCCACTTCGAGAGTGATGGTCTTACCAGTCAGGGTCTTCACGAAGATCTGCATCCCACCTCTAA

11740.2.contig

AAGTCACAAACAGACAAAGATTATTACCAGCTGCAAGCTATATTAGAAGCTGAACGAAGAGACAGAGGTCATGATT
CTGAGATGATTGGAGACCTTCAAGCTCGAATTACATCTTTACAAGAGGAGGTGAAGCATCTCAAACATAATCTCGA
AAAAGTGGAAGGAGAAAGAAAAGAGGCTCAAGACATGCTTAATCACTCAGAAAAGGAAAAGAATAATTTAGAGATA
GATTTAAACTACAACTTAAATCATTACAACAACGGTTAGAACAAGAGGTAAATGAACACAAAGTAACCAAAGCTC
GTTTAACTGACAAACATCAATCTATTGAAGAGGCAAAGTCTGTGGCAATGTGTGAGATGGAAAAAAGCTGAAAGA
AGAAAGAGAAGCTCGAGAGAAGGCTGAAAATCGGGTTGTTGAGATTGAGAAACAGTGTTCCATGCTAGACGTTGAT
CTGAAGCAATCTCAGCAGAACTAGAACATTTGACTGGAAATAAAGAAAGGATGGAGGATGAAGTTAAGAATCTA

Fig. 15D

11765.2&64.2.contig

CGCCTCCACCATGTCCATCAGGGTGACCCAGAAGTCCTACAAGGTGTCCACCTCTGGCCCCCGGGCCTTCAGCAGC
CGCTCCTACACGAGTGGGCCCCGTTCCCGCATCAGCTCCTCGAGCTTCTCCCGAGTGGGCAGCAGCAACTTTGCGG
GTGGCCTGGGCGGCGGCTATGGTGGGGCCAGCGGCATGGGAGGCATCACCGCAGTTACGGTCAACCAGAGCCTGCT
GAGCCCCCTTGCTCTGGAGGTGGACCCCAACATCCAGGCCGTGCGCACCCAGGAGAAGGAGCAGATCAAGACCTC
AACAACAAGTTTGCTCCTTCATAGACAAGGTACGGTTCTGGAGCAGCAGAACAAAGATGCTGGAGACCAAGTGA
GCCTCCTGCAGCAGCAGAAGACGGCTCGAAGCAACATGGACAACATGTTGAGAGCTACATCAACARCTTAGGCG
GCAGCTGGAGACTCTGGGCCAGGAGAAGCTGAAGCTGGAGGCGGAGCTTGGCAACATGCAGGGGCTGGTGGAGGAC
TTCAAGAACAAAGTATGAGGATGAGATCAATAAGCGTACAGAGATGGAGAACGAATTTGCTCATCAAGAAGGATG
TGGATGAAGCTTACATGAACAAGGTAGAGCTGGAGTCTCGCCTGGAAGGGCTGACCGACGAGATCAACTTCTCAG
GCAGCTGTATGAAGAGGAGATCCGGGAGCTGCAGTCCCAGATCTCGGACACATCTGTGGTGTGTCCATGGACAAC
AGCCGCTCCCTGGACATGGACAGCATCATTGCTGAGGTCAAGGCACAGTACGAGGATATTGCCAACCGCAGCCGGG
CTGAGGCTGAGAGCATGTACCAGGTCAAGTATGAGGAGCTGCAGAGCCTGGCTGGGAAGCACGGGGATGACCTGCG
GCGCACAAAGACTGAGATCTCTGAGATGAACCCGGAACATCAGCCCGGCTXCAGGCTGAGATTGAGGGCCTCAAAG
GCCAGAXGGCTTXCCTGGAXGXCCGCCAT

11767.2.contig

CCCGGAGCCAGCCAACGAGCGGAAAATGGCAGACAATTTTTGCTCCATGATGCGTTATCTGGGTCTGGAAACCCA
AACCTCAAGGATGGCCTGGCGCATGGGGGAACAGCCTGCTGGGGCAGGGGGCTACCCAGGGGCTTCTATCCTG
GGGCTACCCCGGGCAGGCACCCCCAGGGGCTTATCCTGGACAGGCACCTCCAGGCGCCTACCTGGAGCACCTGG
AGCTTATCCCGGAGCACCTGCACCTGGAGTCTACCCAGGGCCACCCAGCGGCCCTGGGGCCTACCCATCTTCTGGA
CAGCCAAGTGCCACCGGAGCCTACCTGCCACTGGCCCCATGGCGCCCCCTGCTGGGCCACTGATTGTGCCTTATA
ACCTGCCTTTGCCTGGGGGAGTGGTGCCTCGCATGCTGATAACAATTCTGGGCACGGTGAAGCCCAATGCAACAG
AATTGCTTTAGATTTCAAAGAGGGAATGATGTTGCCTTCCACTTTAACCACGCTTCAATGAGAACAAACAGGAGA
GTCATTGGTTGCAATACAAAGCTGGATAA

11768-1&2

GGGAATGCAACAACCTTTATTGAAAGGAAAGTGCAATGAAATTTGTTGAAACCTTAAAGGGGAACTTAGACACCC
CCCCTCRAgCGMAGKACCARGTGCAAgGTGGACTCTTTCTGGATGTTGTAGTCAGACAGGGTRCGWCCATCTTCC
AGCTGTTTTYCCRGCAAAGATCAACCTCTGCTGATCAGGAGGRATGCCTTCCTTATCTTGGATCTTTGCCTTGACAT
TCTCGATGGTGTCACTGGGCTCCACCTCGAGGGTGATGGTCTTACCAGTCAGGGTCTTCACGAAGATYTGATCCC
ACCTCTGAGACGGAGCACCAGGTGCAGGGTRGACTCTTTCTGGATGTTGTAGTCAGACAGGGTGCGYCCATCTTCC
AGCTGcTTTCCSaGCAAAGATCAACCTCTGCTGGTCAGGAGGRATGCCTTCCTTGTCTYTGATCTTTGCTTTGACR
TTCTCAATGGTGTCACTCGGCTCCACTTCGAGAGTGATGGTCTTACCAGTCAGGGTCTTCACGAAGATCTGCATCC
CACCTCTAAGACGGAGCACCAGGTGCAGGGTGGACTCTTTCTGGATGgTTGTAGTCAGACAGGGTGCGTCCATCTT
CCAGCTGTTTCCCAGCAAAGATCAACCT

Fig. 15E

11768-1&2-11735-1&2

AGGTTGATCTTTGCTGGGAAACAGCTGGAAGATGGACGCACCCTGTCTGACTACAACcCATCCAGAAAGAGTCCACC
CTGCACCTGGTGCTCCGTCTTAGAGGTGGGATGCAGATCTTCGTGAAGACCCTGACTGGTAAGACCATCACTCTCG
AAGTGGAGCCGAGTGACACCATTGAGAAYGTCAARGCAAAGATCCARGACAAGGAAGGCATYCCTCCTGACCAGCA
GAGGTTGATCTTTGCTSGGAAAgCAGCTGGAAGATGGRCGCACCCTGTCTGACTACAACATCCAGAAAGAGTCYAC
CCTGCACCTGGTGCTCCGTCTCAGAGGTGGGATGTCARATCTTCGTGAAGACCCTGACTGGTAAGACCATCACCTC
GAGGTGGAGCCAGTGACACCATCGAGAATGTCAAGGCAAAGATCCAAGATAAGGAAGGCATCCCTCCTGATCAGC
AGAGGTTGATCTTTGCTGGGAAACAGCTGGAAGATGGACGCACCCTGTCTGACTACAACATCCAGAAAGAGTCCAC
cTYTGACACYTGGTMCTBCGtCTYaGAGGKGGGRTGcaaTCTWMGTKWagaCaCtCaCTKKYAAGRYYaTCAMCMW
tgAKKTCgAKYSCASTKWCaCTWTCRAKAAMGTYRWWGCAWagaTCCMAGACAAGGAAGGCATTCTCCTGACCAG
CAGAGGTTGATCT

11769.1.contig

ATGGAGTCTCACTCTGTGCGACCAGGCTGGAGCGCTGTGGTGCGATATCGGCTCACTGCAGTCTCCACTTCTGGGT
TCAAGCGATCCTCCTGCCTCAGCCTCCCGAGTAGCTGGGACTACAGGCAGGCGTCACCATAATTTTTGTATTTTA
GTAGAGACATGGTTTCGCCATGTTGGCTGGGCTGGTCTCGAACTCCTGACCTCAAGTGATCTGTCTGGCCTCCCA
AAGTGTTGGGATTACAGGCGAAAGCCAACGCTCCCGGCCAGGGAACAACCTTTAGAATGAAGGAAATATGCAAAAGA
ACATCACATCAAGGATCAATTAATTACCATCTATTAATTACTATATGTGGGTAATTATGACTATTTCCCAAGCATT
CTACGTTGACTGCTTGAGAAGATGTTTGTCTGCATGGTGGAGAGTGGAGAAGGGCCAGGATTCTTAGGTT

11769.2.contig

AGCGCGGTCTTCCGGCGCGAGAAAGCTGAAGGTGATGTGGCCGCCCTCAACCGACGCATCCAGCTCGTTGAGGAGG
AGTTGGACAGGGCTCAGGAACGACTGGCCACGGCCCTGCAGAAGCTGGAGGAGGCAGAAAAAGCTGCAGATGAGAG
TGAGAGAGGAATGAAGGTGATAGAAAACCGGGCCATGAAGGATGAGGAGAAGATGGAGATTGAGGAGATGCAGCTC
AAAGAGGCCAAGCACATTGCGGAAGAGGCTGACCGCAAATACGAGGAGGTAGCTCGTAAGCTGGTCATCCTGGAGG
GTGAGCTGGAGAGGGCAGAGGAGCGTGCGGAGGTGTCTGAACTAAAATGTGGTGACCTGGAAGAAGAACTCAAGAA
TGTTACTAACAATCTGAAATCTCTGGAGGCTGCATCTGAAAAGTATTCTGAAAAGGAGGACAAATATGAAGAAGAA
ATTAAACTTCTGTCTGACAAACTGAAAGAGGCTGAGACCCGTGCTGAATTTGCAGAGAGAACGGTTGCAAACTGG
AAAAGACAATTGATGACCTGGAAGAGAAACTTGCCACG

11770.1.contig

GTGCACAGGTCCCATTATTGTAGAAAATAATAATAATTACAGTGATGAATAGCTCTTCTTAAATTACAAAACAGA
AACCACAAAGAAGGAAGAGGAAAAACCCAGGACTTCCAAGGGTGAAGCTGTCCCCTCCTCCCTGCCACCCTCCCA
GGCTCATTAGTGCTTTGGAAGGGGCAGAGGACTCAGAGGGGATCAGTCTCCAGGGGCCCTGGGCTGAAGCGGGTG
AGGCAGAGAGTCTGAGGCCACAGAGCTGGGCAACCTGAGCCGCCTCTCTGGCCCCCTCCCCACCACTGCCCAAA
CCTGTTTACAGCACCTTCGCCCCCTCCCCTCTAAACCCGTCCATCCACTCTGCACTTCCAGGCAGGTGGGTGGGCC
AGGCCTCAGCCATACTCCTGGGCGCGGGTTTCGGTGAGCAAGGCACAGTCCAGAGGTGATATCAAGGCCT

Fig. 15F

11770.2.contig

GCAAGGAACTGGTCTGCTCACACTTGCTGGCTTGCGCATCAGGACTGGCTTTATCTCCTGACTCACGGTGCAAAGG
TGCACTCTGCGAACGTTAAGTCCGTCCCCAGCGCTTGGAATCCTACGGCCCCACAGCCGGATCCCCTCAGCCTTC
CAGGTCTCAACTCCCGTGGACGCTGAACAATGGCCTCATGGGGCTACAGGTAATGGGCATCGCGCTGGCCGTCC
TGGGCTGGCTGGCCGTATGCTGTGCTGCGCGCTGCCCATGTGGCGCGTGACGGCCTTCATCGGCAGCAACATTGT
CACCTCGCAGACCATCTGGGAGGGCCTATGGATGAACTGCGTGGTGCAGAGCACCAGCCAGATGCAGTGAAGGTG
TACGACTCGCTGCTGGCACTGCCGAGGACCTGCAGGCGGCCCGCGCCCTCGTCATCATCA

11773.1.contig

TGCAAAAGGGACACAGGGGTTCAAAAATAAAAATTTCTCTTCCCCCTCCCCAACCTGTACCCCAGCTCCCCGACC
ACAACCCCTTCTCTCCCCGGGAAAGCAAGAAGGAGCAGGTGTGGCATCTGCAGCTGGGAAGAGAGAGGCCGGGG
AGGTGCCGAGCTCGGTGCTGGTCTCTTTCAAATATAAATACXTGTGTGAGAACTGGAAAATCCTCCAGCACCCAC
CACCAAGCACTCTCCGTTTTCTGCCGGTGTGGAGAGGGGCGGGGGGCAGGGGCGCCAGGCACCGGTGGCTGC
GGTCTACTGCATCCGCTGGGTGTGACCCCGCAGCCTCCTGCTGCTCATTGTAGAAGAGATGACACTGGGGGTCC
CCCCGGATGGTGGGGGCTCCCTGGATCAGCTTCCCGGTGTTGGGGTTACACACCAGCACTCCCCACGCTGCCCGT
TCAGAGACATCTTGCACTGTTTGAGGTTGTACAGGCCATGCTTGTACAGTTG

11778.1.contig

GGGTTGGAGGGACTGGTTCTTTATTTCAAAAAGACACTTGTCAATATTCAGTATCAAAACAGTTGCACTATTGATT
TCTCTTTCTCCCAATCGGCCCCAAAGAGACCACATAAAAGGAGAGTACATTTTAAGCCAATAAGCTGCAGGATGTA
CACCTAACAGACCTCCTAGAAACCTTACCAGAAAAATGGGGACTGGGTAGGGAAGGAACTTAAAAGATCAACAAAC
TGCCAGCCCACGACTGCAGAGGCTGTACAGCCAGATGGGGTGGCCAGGGTGCCACAAACCCAAAGCAAAGTTTC
AAAATAATATAAAATTTAAAAAGTTTTGTACATAAGCTATTCAAGATTTCTCCAGCACTGACTGATACAAAGCACA
ATTGAGATGGCACTTCTAGAGACAGCAGCTTCAAACCCAGAAAAGGGTGATGAGATGAGTTTCACATGGCTAAATC
AGTGGCAAAAACACAGTCTTCTTTCTTTCTTTCAAGGAGGCAGGAAAGCAATTAAGTGGTCACTCAACATA
AGGGGGACATGATCCATTCTGTAAGCAGTTGTGAAGGGG

11778-2&30-2

CAGGAACCGGAGCGCGAGCAGTAGCTGGGTGGGCACCATGGCTGGGATCACCACCATCGAGGCGGTGAAGCGCAAG
ATCCAGGTTCTGCAGCAGCAGGCAGATGATGCAGAGGAGCGAGCTGAGCGCTCCAGCGAGAAGTTGAGGGAGAAA
GGCGGGCCCGGGAACAGGCTGAGGCTGAGGTGGCCTCCTGAACCGTAGGATCCAGCTGGTTGAAGAAGAGCTGGA
CCGTGCTCAGGAGCGCTGGCCACTGCCCTGCAAAAGCTGGAAGAAGCTGAAAAAGCTGCTGATGAGAGTGAGAGA
GGTATGAAGGTTATTGAAAACCGGGCCTTAAAAGATGAAGAAAAGATGGAATCCAGGAAATCCAACCTCAAAGAAG
CTAAGCACATTGCAGAAGAGGCAGATAGGAAGTATGAAGAGGTGGCTCGTAAGTTGGTGATCATTGAAGGAGACTT
GGAACGCACAGAGGAACGAGCTGAGCTGGCAGAGTCCCGTTGCCGAGAGATGGATGAGCAGATTAGACTGATGGAC
CAGAACCTGAAGTGTCTGAGTGC

Fig. 15G

11782.1.contig

ATCTACGTCATCAATCAGGCTGGAGACACCATGTTCAATCGAGCTAAGCTGCTCAATATTGGCTTTCAAGAGGCCT
TGAAGGACTATGATTACAACCTGCTTTGTGTTCAAGTGATGTGGACCTCATTCCGATGGACGACCGTAATGCCTACAG
GTGTTTTTCGCAGCCACGGCACATTTCTGTTGCAATGGACAAGTTCGGGTTTAGCCTGCCATATGTTCAAGTATTTT
GGAGGTGTCTCTGCTCTCAGTAAACAACAGTTTCTTGCCATCAATGGATTCCCTAATAATTATTGGGGTTGGGGAG
GAGAAGATGACGACATTTTTTAACAGATTAGTTCAATAAGGCATGTCTATATCACGTCCAAATGCTGTAGTAGGGAG
GTGTGCAATGATCCGGCATTCAAGAGACAAGAAAAATGAGCCCAATCCTCAGAGGTTTGACCGGATCGCACATACA
AAGGAAACGATGCGCTTCGATGGTTTGAAGTCACTTACCTACAAGGTGTTGGATGTCAGAGATACCCGTTATATAC
CCAAATCAC

11782.2.contig

CTAGACCTCTAATTAAGGCACAATCATGCTGGAGAATGAACAGTCTGACCCCGAGGGCCACAGCGAATTTTAGG
GAAGGAGGCAAAGAGGTGAGAAGGGAAAGGAAAGGAAGGAAGGAGAACAATAAGAACTGGAGACGTTGGGTGG
GTCAGGGAGTGTGGTGGAGGCTCGGAGAGATGGTAAACAAACCTGACTGCTATGAGTTTTCAACCCCATAGTCTAG
GGCCATGAGGGCGTCAGTTCTTGGTGGCTGAGGGTCCTTCCACCCAGCCACCTGGGGGAGTGGAGTGGGGAGTTC
TGCCAGGTAAGCAGATGTTGTCTCCCAAGTTCCTGACCCAGATGTCTGGCAGGATAACGCTGACCTGTTCCCTCAA
CAAGGGACCTGAAAGTAATTTTGCTCTTTAC

11783-1 & 2

CCGAATTCAGCGTCAACGATCCYTCCCTTACCATCAAATCAATTGGCCACCAATGGTACTGAACCTACGAGTACA
CCGACTACGGCGGACTAATCTTCAACTCCTACATACTTCCCCATTATTCCTAGAACCAGGCGACCTGCGACTCC
TTGACGTTGACAATCGAGTAGTACTCCCGATTGAAGCCCCATTCTGTATAATAATTACATCACAAGACGTCTTGCA
CTCATGAGCTGTCCCCACATTAGGCTTAAAAACAGATGCAATTCGCGGACGTCTAAGCCAAACCACTTTACCGCT
ACACGACCGGGGGTATACTACGGTCAATGCTCTGAAATCTGTGGAGCAAACCACAGTTTCATGCCCATCGTCCCTAG
AATTAATTCCTTAAAAATCTTTGAAATAGGGCCCGTATTTACCCTATAGCACCCCTCTACCCCTCTAG

11786.1.contig

GCTCTTCACACTTTTTATTGTTAATTCTCTTCACATGGCAGATACAGAGCTGTCGTCTTGAAGACCACCACTGACCA
GGAAATGCCACTTTTACAAAATCATCCCCCTTTTCATGATTGGAACAGTTTTCTGACCGTCTGGGAGCGTTGAA
GGGTGACCAGCACATTTGCACATGCAAAAAGGAGTGACCCCAAGGCCTCAACCACACTTCCAGAGCTCACCATG
GGCTGCAGGTGACTTGCCAGGTTTGGGGTTCGTGAGCTTTCTTGCTGCTGCGGTGGGGAGGCCCTCAAGAACTGA
GAGGCCGGGGTATGCTTCATGAGTGTTAACATTTACGGGACAAAAGCGCATCATTAGGATAAGGAACAGCCACAGC
ACTTCATGCTTGTGAGGGTTAGCTGTAGGAGCGGGTGAAGGATTCCAGTTTATGAAAATTTAAAGCAAACAACGG
TTTTTAGCTGGGTGGGAAACAGGAAAACGTGATGTCGGCCAATGACCACCATTTTTCTGCCCATGTGAAGGTCCC
CATGAAACC

11786.2.contig

CAAGCGCTTGGCGTTTGGACCCAGTTCAGTGAGGTTCTTGGGTTTTGTGCCTTTGGGGATTTTGGTTTGACCCAGG
GGTCAGCCTTAGGAAGGTCTTCAGGAGGAGGCCGAGTTCCCTTCAGTACCACCCCTCTCTCCCACTTTCCCTCT
CCCGGCAACATCTCTGGGAATCAACAGCATATTGACACGTTGGAGCCGAGCCTGAACATGCCCTCGGCCCCAGCA
CATGGAAAACCCCTTCTTGCCTAAGGTGTCTGAGTTTCTGGCTCTTGAGGCATTTCCAGACTTGAAATTCTCAT
CAGTCCATTGCTCTTGAGTCTTTGCAGAGAACCTCAGATCAGGTGCACCTGGGAGAAAGACTTTGTCCCACTTAC
AGATCTATCTCCTCCCTTGGGAAGGGCAGGGAATGGGGACGGTGTATGGAGGGGAAGGGATCTCCTGCGCCCTTCA
TTGCCACACTTGGTGGGACCATGAACATCTTTAGTGTCTGAGCTTCTCAAATTACTGCAATAGGA

13691.1&2

AGCGTCAAATCAGAATGGAAAAGACTCAAAACCATCATCAACACCAAGATCAAAGGACAAGRATCCTTCAAGAAA
CAGGAAAAAACTCCTAAAACACCAAAAGGACCTAGTTCTGTAGAAGACATTAAAGCAAAAATGCAAGCAAGTATAG
AAAAAGGTGGTTCTCTTCCCAAAGTGAAGCCAAATTCATCAATTATGTGAAGAATTGCTTCCGGATGACTGACCA
AGAGGCTATTCAAGATCTCTGGCAGTGGAGGAAGTCTCTTAAAGAAAATAGTTTAAACAATTTGTTAAAAAATTTT
CCGTCTTATTTTCAATTTCTGTAACAGTTGATATCTGGCTGTCTTTTATAATGCAGAGTGAGAACTTTCCCTACCG
TGTTTGATAAATGTTGTCCAGGTTCTATTGCCAAGAATGTGTTGTCCAAAATGCCTGTTTAGTTTTTAAAGATGGA
ACTCCACCCCTTGCTTGGTTTTAAGTATGTATGGAATGTTATGATAGGACATAGTAGTAGCGGTGGTCAGACATGG
AAATGGTGGGSMGACAAAAATATACATGTGAAATAA

13692.1&2

TCCGAATTCCAAGCGAATTATGGACAAACGATTCCCTTTTAGAGGATTACTTTTTTCAATTTTCGGTTTTAGTAATCT
AGGCTTTGCCTGTAAAGAATACAACGATGGATTTTAAATACTGTTTGTGGAATGTGTTTAAAGGATTGATTCTAGA
ACCTTTGTATATTTGATAGTATTTCTAATCTTTCATTTCTTTACTGTTTGCAGTTAATGTTTCATGTTCTGCTATGCA
ATCGTTTATATGCACGTTTCTTTAATTTTTTTAGATTTTCTGGATGTATAGTTTAAACAACAAAAAGTCTATTTA
AAACTGTAGCAGTAGTTTACAGTTCTAGCAAAGAGGAAAGTTGTGGGGTTAACTTTGTATTTTCTTTCTTATAGA
GGCTTCTAAAAAGGTATTTTATATGTTCTTTTAAACAATATTGTGTACAACCTTTAAACATCAATGTTTGGAT
CAAAACAAGACCCAGCTTATTTTCTGC

13693.2

TGTGGTGGCGCGGGCTGAGGTGGAGGCCAGGACTCTGACCCTGCCCTGCCTTCAGCAAGGCCCCCGGCAGCGCC
GGCCACTACGAAGTCCCGTGGGTGAAAAATATAGGCCAGTAAAGCTGAATGAAATTGTCGGGAATGAAGACACCG
TGAGCAGGCTAGAGGTCTTTGCAAGGGAAGGAAATGTGCCAACATCATCATTGCGGGCCCTCCAGGAACCGGCAA
GACCACAAGCATTCTGTGCTTGGCCCGGGCCCTGCTGGGCCCAGCACTCAAAGATGCCATGTTGGAAGTCAATGCT
TCAAATGACAGGGGCATTGACGTTGTGAGGAATAAAATTTAAATGTTTGCTCAACAAAAAGTCACTCTTCCCAAAG
GCCGACATAAGATCATCATTCTGGATGAAGCAGACAGCATGACCGACGGAGCCCAGCAAGCCTTGAGGAGAACCAT
GGAAATCTACTCTAAACCACTCGTTCGCCCTTGCTTGTAAATGCTTCGGATAAGATCATCGAGCC

13696.1-13744.1

CTTTGCAAAGCTTTTATTTTCATGTCTGCGGCATGGAATCCACCTGCACATGGCATCTTAGCTGTGAAGGAGAAAGC
AGTGACGAGAAGGAATGAGTGGGCGGAACCAACGGCCTCCACAAGCTGCCTTCCAGCAGCCTGCCAAGGCCATGG
CAGAGAGAGACTGCAAACAAACACAAGCAAACAGAGTCTTTCACAGCTGGAGTCTGAAAGCTCATAGTGGCATGT
GTGAATCTGACAAAATTAAGGTGTGCATAGTCCATTACATGCATAAAACACTAATAATAATCCTGTTTACACGTG
ACTGCAGCAGGCAGGTCCAGCTCCACCACTGCCCTCCTGCCACATCACATCAAGTGCCATGGTTTAGAGGGTTTTT
CATATGTAATTCTTTTATTCTGTAAAAGGTAACAAAATATACAGAACAAAACCTTCCCTTTTTTAAACTAATGTTA
CAAATCTGTATTATCACTTGGATATAAATAGTATATAAGCTGATC

13700.1

CAAGGGATATATGTTGAGGGTACRGRGTGACACTGAACAGATCACAAAGCACGAGAAACATTAGTTCTCTCCCTCC
CCAGCGTCTCCTTCGTCTCCCTGGTTTTCCGATGTCCACAGAGTGAGATTGTCCCTAAGTAACTGCATGATCAGAG
TGCTGKCTTTATAAGACTCTTCATTACAGCGTATCCAATTCAGCAATTGCTTCATCAAATGCCGTTTTTGCCAGGCT
ACAGGCCTTTTCAGGAGAGTTTGAATCTCATAGTAAAAGACTGAGAAATTTAGTGCCAGACCAAGACGAATTGGG
TGTGTAGGCTGCATTNCTTTCTTACTAATTTCAAATGCTTCCTGGTAAGCCTGCTGGGAGTTCGACACAAGTGTT
TGTTTGTTGCTCCAGATGCCACTTCAGAAAGATACCTAAAATAATCTCCTTTCATTTTCAAAGTAGAACAC

13700.2

TCCGGAGCCGGGGTAGTCGCCGCCGCCGCCGGTGCAGCCACTGCAGGCACCGCTGCCGCCGCCTGAGTAGTGG
GCTTAGGAAGGAAGAGGTCATCTCGCTCGGAGCTTCGCTCGGAAGGGTCTTTGTTCCCTGCAGCCCTCCACGGGA
ATGACAATGGATAAAAGTGAGCTGGTACAGAAAGCCAACTCGCTGAGCAGGCTGAGCGATATGATGATATGGCTG
CAGCCATGAAGGCAGTCACAGAACAGGGGCATGAACTCTCCAACGAAGAGAGAAATCTGCTCTCTGTTGCCTACAA
GAATGTGGTAAGGCCGCCGCCGCCGCTCTTCCTGGCGTGTCTCTCCAGCATTGAGCAGAAAACAGAGAGGAATGAGA
AGAAGCAGCAGATGGGCAAAGAGTACCGTGAGAAGATAGAGGCAGAACTGCAGGACATCTGCAATGATGTTCTGGA
GCTTGTTGGACAAATATCTTATTCCAATGCTACACAACCCAGAAA

13701.1

AAAAAGCAGCARGTTCAACACAAAATAGAAATCTCAAATGTAGGATAGAACAAAACCAAGTGTGTGAGGGGGGAAG
CAACAGCAAAAGGAAGAAATGAGATGTTGCAAAAAAGATGGAGGAGGGTCCCCCTCTCCTCTGGGGACTGACTCAA
AACTGATGTGGCAGTATACACCATTCAGAGTCAGGGGTGTTCAATCTTTTTTGGGAGTAAGAAAAGGTGGGGAT
TAAGAAGACGTTTCTGGAGGCTTAGGGACCAAGGCTGGTCTCTTTCCCCCTCCCAACCCCTTGATCCCTTTCTC
TGATCAGGGGAAAGGAGCTCGAATGAGGGAGGTAGAGTTGGAAAGGGAAAGGATTCCAATTGACAGAATGGGACAG
ACTCCTTCCCA

13701.2

TGGCAATAGCACAGCCATCCAGGAGCTCTTCARGCGCATCTCGGAGCAGTTCACTGCCATGTTCCGCCGGAAGGCC
TTCCTCCACTGGTACACAGGCGAGGGCATGGACGAGATGGAGTTCACCGAGGCTGAGAGCAACATGAACGACCTCG
TCTCTGAGTATCAAGCAGTACCAGGATGCCACCGCAGAAGAGGAGGAGGATTTCCGGTGAGGAGGCCGAAGAGGAGG
CCTAAGGCAGAGCCCCCATCACCTCAGGCTTCTCAGTTCCCTTAGCCGTCTTACTCAACTGCCCCTTTCTCTCCC
TCAGAATTTGTGTTTGCTGCCTCTATCTGTTTTTTGTTTTTCTTCTGGGGGGTCTAGAACAGTGCCTGGCACA
TAGTAGGCGCTCAATAAATACTTGGTTGNTGAATGTCTCCT

13702.2

AGCTGGCGCTAGGGCTCGGTTGTGAAATACAGCGTRGTCAGCCCTTGCCTCAGTGTAGAAACCCACGCCTGTAAG
GTCGGTCTTCGTCCATCTGCTTTTTTCTGAAATACACTAAGAGCAGCCACAAAACCTGTAACCTCAAGGAAACCATA
AAGCTTGAGTGCCTTAATTTTAACCAAGTTTCCAATAAACGGTTTACTACCT

13704.2-13740.2

GGAGATGAAGATGAGGAAGCTGAGTCAGCTACGGGCARGCGGGCAGCTGAAGATGATGAGGATGACGATGTCGATA
CCAAGAAGCAGAAGACCGACGAGGATGACTAGACAGCAAAAAAGGAAAAGTTAAA

13706.1

GATGAAAATTAATACTTAAATTAATCAAAAGGCACTACGATACCACCTAAAACCTACTGCCTCAGTGGCAGTAKG
CTAAKGAAGATCAAGCTACAGSACATYATCTAATATGAATGTTAGCAATTACATAKCARGAAGCATGTTTGCTTTC
CAGAAGACTATGGNACAATGGTCATTWGGGCCCAAGAGGATATTTGGCCNGGAAAGGATCAAGATAGATNAANGTA
AAG

13706.2

GAGTAGCAACGCAAAGCGCTTGGTATTGAGTCTGTGGGSGACTTCGGTTCCGGTCTCTGCAGCAGCCGTGATCGCT
TAGTGGAGTGCTTAGGGTAGTTGGCCAGGATGCCGAATATCAAAATCTTCAGCAGGCAGCTCCCACCAGGACTTAT
CTCASAAAATTGCTGACCGCCTGGGCCTGGAGCTAGGCAAGGTGGTACTAAGAAATTCAGCAACCAGGAGACCTG
TGTGGAAATTGGTGAAAGTGTACCGTGGAGAGGATGTCTACATTGTTGAGAGTGGNTGTGGCGAAATCAATGACAA
TTTAATGGAGCTTTTGATCATGATTAATGCCTGCAAGATTGCTTCAGCCAGCCGGGTACTGCAGTCATCCCATGC
TTCCCTTATGCCCCGGCAGGATAAGAAAGATNAGAGCCGGGCCCAATCTCAGCCAAGCTTGGTGCAAATATGCT
ATCTGTAGCAGTGCAGATCATATTATCACCATGGACCTACATGCTTCTCAAATTCANGGCTTTTT

13707.3

ATGCAAAAGGGGACACAGGGGGTTCAAAAATAAAAAATTTCTCTTCCCCCTCCCCAACCTGTACCCCAGCTCCCCG
ACCACAACCCCTTCTCCCCGGGAAAGCAAGAAGGAGCAGGTGTGGCATCTGCAGCTGGGAAGAGAGAGGCCG
GGGAGGTGCCGAGCTCGGTGCTGGTCTCTTTCCAAATATAAATACGTGTGTCAGAACTGGAAAATCCTCCAGCACC
CACCACCCAAGCACTCTCCGTTTTCTGCCGGTGTGGAGAGGGGCGGNGGGCAGGGGCGCCAGGCACCGGCTGGC
TGCGGTCTACTGCATCCGCTGGGTGTGCACCCCGCA

13710.2

AGGTTGGAGAAGGTCATGCAGGTGCAGATTGTCCAGGSKCAGCCACAGGGTCAAGCCCAACAGGCCAGAGTGGCA
CTGGACAGACCATGCAGGTGATGCAGCAGATCATCTAACACAGGAGAGATCCAGCAGATCCCGGTGCAGCTGAA
TGCCGGCCAGCTGCAGTATATCCGCTTAGCCCAGCCTGTATCAGGCACTCAAGTTGTGCAGGGACAGATCCAGACA
CTTGCCACCAATGCTCAACAGATTACACAGACAGAGGTCCAGCAAGGACAGCAGCAGTTCAAGCCAGTTCACAAGA
TGGACAGCAGCTCTACCAGATCCAGCAAGTCACCATGCCTGCGGGCCANGACCTCGCCAGCCCATGTTTCATCCAGT
CAAGCCAACCAGCCCTTCNACGGGCAGGCCCCCCAGGTGACCGGCGACTGAAGGGCCTGAGCTGGCAAGGCCAANG
ACACCCAACACAATTTTTGCCATACAGCCCCCAGGCAATGGGCACAGCCTTTCTTCCCAGAGGAC

13710-1

TGAGATTTATTGCATTTTCATGCAGCTTGAAGTCCATGCAAAGGRGACTAGCACAGTTTTTAATGCATTTAAAAAT
AAAAGGGAGGTGGGCAGCAAAACACACAAAGTCCTAGTTTCTGGGTCCCTGGGAGAAAAGAGTGTGGCAATGAATC
CACCCACTCTCCACAGGGAATAAATCTGTCTCTTAAATGCAAAGAATGTTTCCATGGCCTCTGGATGCAATACAC
AGAGCTCTGGGGTCAGAGCAAGGGATGGGGAGAGGACCACGAGTGAAAAAGCAGCTACACACATTCACCTAATTCC
ATCTGAGGGCAAGAACAACGTGGCAAGTCTTGGGGTAGCAGCTGTT

13711.1

TCCAGACATGCTCCTGTCTAGGCGGGGAGCAGGAACCAGACCTGCTATGGGAAGCAGAAAGAGTTAAGGGAAGGT
TTCCTTTCATTCTGTTCTTCTTTTGTCTTTTGAACAGTTTTTAAATATACTAATAGCTAAGTCATTTGCCAGC
CAGGTCCCGGTGAACAGTAGAGAACAAGGAGCTTGCTAAGAATTAATTTTGCTGTTTTTACCCCATTCAAACAGA
GCTGCCCTGTTCCCTGATGGAGTTCCATTCTGCCAGGGCACGGCTGAGTAACACGAAGCCATTCAAGAAAGGCGG
GTGTGAAATCACTGCCACCCCATGGACAGACCCCTCACTCTTCTTCTTAGCCGCAGCGCTACTTAATAAATATAT
TTATACTTTGAAATTATGATAACCGATTTTTCCCATGCGGCATCTAAGGGCACTTGCCAGCTCTTATCCGGACAG
TCAAGCACTGTTGTTGGACAACAGATAAAGGAAAAGAAAAAGAAGAAAACAACCGCAACTTCTGT

13711.2

TGAGACGGACCACTGGCCTGGTCCCCCTCATKTGCTGTCGTAGGACCTGACATGAAACGCAGATCTAGTGGCAGA
GAGGAAGATGATGAGGAACCTTCTGAGACGTGGCAGCTTCAAGAAGAGCAATTAATGAAGCTTAACCTCAGGCCTGG
GACAGTTGATCTTGAAAGAAGAGATGGAGAAAGAGAGCCGGGAAAGGTCTCTGTTAGCCAGTCGCTACGATTC
TCCCATCAACTCAGCTTCACATATTCATCATCTAAACTGCATCTCTCCCTGGCTATGGAAGAAATGGGCTTCAC
CGGCCTGTTTCTACCGACTTCGCTCAGTATAACAGCTATGGGGATGTGAGCGGGGAGTGCGAGATTACCAGACAC
TTCCAGATGGCCACATGCCTGCAATGAGAATGGACCGAGGAGTGTCTATGCCCAACATGTTGGAACCAAAGATATT
TCCATATGAAATGCTCATGGTGACCAACAGAGGGCCGAAACCAATCTCAGAGAGGTGGACAGAA

13713.1&2

TCACTTTATTTTTCTTGTATAAAAACCTATGTTGTAGCCACAGCTGGAGCCTGAGTCCGCTGCACGGAGACTCTG
GTGTGGGTCTTGACGAGGTGGTCAGTGAACCTCTGATAGGGAGACTTGGTGAATACAGTCTCCTTCCAGAGGTGCG
GGGTGAGGTAGCTGTAGGTCTTAGAAATGGCATCAAAGGTGGCCTTGGCGAAGTTGCCAGGGTGGCAGTGCAGCC
CCGGGCTGAGGTGTAGCAGTCATCGATACCAGCCATCATGAG

13715.4

CTGGAATATAGACCCGTGATCGACAAAACCTTTGAACGAGGCTGACTGTGCCACCGTCCCGCCAGCCATTGCTCCT
ACTGATGAGACAAGATGTGGTGATGACAGAATCAGCTTTTGTAAATATGTATAATAGCTCATGCATGTGTCCATGT
CATAACTGTCTTCATACGCTTCTGCACTCTGGGGAAGAAGGAGTACATTGAAGGGAGATTGGCACCTAGTGGCTGG
GAGCTTGCCAGGAACCCAGTGGCCAGGGAGCGTGGCACTTACCTTTGTCCCTTGCTTCATTCTTGTGAGATGATAA
AACTGGGCACAGCTCTTAAATAAAATATAAATGAACA

13717.1&2

TGAATGGGGAGGAGCTGACCCAGGAAATGGAGCTTGNGGAGACCAGGCCTGCAGGGGATGGAACCTTCCAGAAGTG
GGCATCTGTGGTGGTGCCTCTTGGGAAGGAGCAGAAGTACACATGCCATGTGGAACATGAGGGGCTGCCTGAGCCC
CTCACCCCTGAGATGGGGCAAGGAGGAGCCTCCTTCATCCACCAAGACTAACACAGTAATCATTGCTGTTCCGGTTG
TCCTTGGAGCTGTGGTCATCCTTGGAGCTGTGATGGCTTTTGTGATGAAGAGGAGGAGAAACACAGGTGGAAAAGG
AGGGGACTATGCTCTGGCTCCAGGCTCCCAGAGCTCTGATATGTCTCTCCAGATTGTAAAGTGTGAAGACAGCTG
CCTGGTGTGGACTTGGTGACAGACAATGTCTTCACACATCTCCTGTGACATCCAGAGACCTCAGTTCTCTTTAGTC
AAGTGTCTGATGTTCCCTGTGAGTCTGCGGGCTCAAAGTGAAGAACTGTGGAGCCCAGTCCACCCCTGCACACCAG
GACCCTATCCCTGCACTGCCCTGTGTTCCCTTCCACAGCCAACCTTGCTGCTCCAGCCAAACATTGGTGGACATCT
GCAGCCTGTCAGCTCCATGCTACCCTGACCTTCAACTCCTCACTTCCACACTGAGAATAATAATTTGAATGTGGGT
GGCTGGAGAGATGGCTCAGCGCTGACTGCTCTTCCAAAGGTCTGAGTTCAAATCCAGCAACCACATGGTGGCTC
ACAACCATCTGTAATGGGATCTAATACCCTCTTCTGCAGTGTCTGAAGACASCTACAGTGTACTTACATATAATAA
TAAATAAG

Fig. 15M

13719.1&2

GGCCGGGCGCGCGCGCCCCGCCACACGCACGCCGGGCGTGCCAGTTTATAAAGGGAGAGAGCAAGCAGCGAGTCT
TGAAGCTCTGTTTGGTGCTTTGGATCCATTTCCATCGGTCCTTACAGCCGCTCGTCAGACTCCAGCAGCCAAGATG
GTGAAGCAGATCGAGAGCAAGACTGCTTTTCAGGAAGCCTTGGACGCTGCAGGTGATAAACTTGTAGTAGTTGACT
TCTCAGCCACGTGGTGTGGGCCTTGCAAAATGATCAAGCCTTTCTTTTCATTCCCTCTCTGAAAAGTATTCCAACGT
GATATTCCTTGAAGTAGATGTGGATGACTGTCAGGATGTTGCTTCAGAGTGTGAAGTCAAATGCATGCCAACATTC
CAGTTTTTTAAGAAGGGACAAAAGGTGGGTGAATTTTCTGGAGCCAATAAGGAAAAGCTTGAAGCCACCATTAAATG
AATTAGTCTAATCATGTTTTCTGAAAATATAACCAGCCATTGGCTATTTAAACTTGTAATTTTTTTAATTTACAA
AAATATAAAATATGAAGACATAAACCCMGTGCCATCTGCGTGACAATAAACATTAATGCTAACACTT

13721.1

TCACATAAGAAATTTAAGCAAGTTACRCTATCTTAAAAACACAACGAATGCATTTTAATAGAGAAACCCTTCCCT
CCCTCCACCTCCCTCCCCACCCTCCTCATGAATTAAGAATCTAAGAGAAGAAGTAACCATAAAACCAAGTTTTGT
GGAATCCATCATCCAGAGTGCTTACATGGTGATTAGGTTAATATTGCCTTCTTACAAAATTTCTATTTTTAAAAAA
ATTATAACCTTGATTGCTTATTACAAAAAATTCAGTACAAAAGTTCAATATATTGAAAAATGCTTTTCCCTCCC
TCACAGCACCGTTTTATATATAGCAGAGAATAATGAAGAGATTGCTAGTCTAGATGGGGCAATCTTCAAATTACAC
CAAGACGCACAGTGGTTTTATTTACCCTCCCCTTCTCATAAG

13721.2

GGAAAGGATTCAAGAATTAGAGGACTTGCTTGCTRRAGAAAAAGACAACCTCTCGTCGCATGCTGACAGACAAAGAG
AGAGAGATGGCGGAAATAAGGGATCAAATGCAGCAACAGCTGAATGACTATGAACAGCTTCTTGATGTAAAGTTAG
CCCTGGACATGGAAATCAGTGCTTACAGGAACTCTTAGAAGGCGAAGAAGAGAGGTTGAAGCTGTCTCCAAGCCC
TTCTTCCCGTGTGACAGTATCCCGAGCATCCTCAAGTCGTAGTGTACCGTACAACCTAGAGGAAAGCGGAAGAGGGT
TGATGTGGAAGAATCAGAGGCGAAGTAGTAGTGTAGCATCTCTCATTCCGCCTCAACCACTGGAAATGTTTGCAT
CGAAGAAATTGATGTTGATGGGAAATTTATCCCGCTTGAAGAACACTTCTGAACAGGATCAACCAATGGGAAGGCT
TGGGAGATGATCAGAAAAATTGGAGACACATCAGTCAGTTATAAATATACCTCAA

13723.1

CATGGGTTTCACCAGGTTGGCCAGGCTGCTCTTGAACCTCTGACCTCAGGTGATCCACCCGCCTCGGCCTCCCAA
GTGCTGGGATTACAGGCGTGAGCCACCACGCCCGGCCCCAAAGCTGTTTCTTTGTCTTTAGCGTAAAGCTCTCC
TGCCATGCAGTATCTACATAACTGACGTGACTGCCAGCAAGCTCAGTCACTCCGTGGTCTTTTTCTCTTTCCAGTT
CTTCTCTCTCTTCAAGTTCTGCCTCAGTGAAAGCTGCAGGTCCCAGTTAAGTGATCAGGTGAGGGTTCTTTGA
ACCTGGTTCTATCAGTCGAATTAATCCTTCATGATGG

13723.2

GATGTGTTGGACCCTCTGTGTCAAAAAAACCTCACAAAGAATCCCCTGCTCATTACAGAAGAAGATGCATTTAAA
ATATGGGTTATTTTCAACTTTTATCTGAGGACAAGTATCCATTAATTATTGTGTCAGAAGAGATTGAATACCTGC
TTAAGAAGCTTACAGAAGCTATGGGAGGAGTTGGCAGCAAGAACAATTTGAACATTATAAAATCAACTTTGATGA
CAGTAAAAATGGCCTTTCTGCATGGGAACCTATTGAGCTTATTGGAATGGACAGTTTAGCAAAGGCATGGACCGG
CAGACTGTGTCTATGGCAATTAATGAAGTCTTTAATGAACCTATATTAGATGTGTTAAAGCAGGGTTACATGATGA
AAAAGGGCCACAGACGGAAAACTGGACTGAAAGATGGTTTGTACTAAAACCCAACATAATTTCTTACTATGTGAG
TGAGGATCTGAAGGATAAGAAAGGAGACATTCTCTTGATGAAATTGCTGTGTAGAAGTCCTTGCCTGACAAAAG
ATGGAAAGAAATGCCTTTT

13725.1

GACTGGTTCTTTATTTCAAAAAGACACTTGTCAATATTCAGTRTCAAAACAGTTGCACTATTGATTTCTCTTTCTC
CCAATCGGCCCCAAAGAGACCACATAAAAGGAGAGTACATTTTAAGCCAATAAGCTGCAGGATGTACACCTAACAG
ACCTCCTAGAAACCTTACCAGAAAATGGGGACTGGGTAGGGAAGGAACTTAAAAGATCAACAACTGCCAGCCCA
CGGACTGCAGAGGCTGTACAGCCAGATGGGGTGGCCAGGGTGCCACAAACCCAAAGCAAAGTTTCAAATAATAT
AAAATTTAAAAAGTTTTGTACATAAGCTATTCAAGATTTCTCCAGCACTGACTGATACAAAGCACAATTGAGATGG
CACTTCTAGAGACAGCAGCTTCAAACCCAGAAAAGGGTGATGAGATGAAGTTTACATGGCTAAATCAGTGGCAAA
AACACAGTCTTCTTTCTTTCTTTCTTTCAAGGANGCAGGAAAGCAATTAAGTGGTCACCTTAACATAAGGGGGAC

13725.2

TGGGTGGGCACCATGGCTGGGATCACCACCATCGAGGCGGTGAAGCGCAAGATCCAGGTTCTGCAGCAGCAGGCAG
ATGATGCAGAGGAGCGAGCTGAGCGCCTCCAGCGAGAAGTTGAGGGAGAAAGGCGGGCCCGGGAACAGGCTGAGGC
TGAGGTGGCTCCTTGAACCGTAGGATCCAGCTGGTTGAAGAAGAGCTGGACCGTGCTCAGGAGCGCCTGGCCACT
GCCCTGCAAAAGCTGGAAGAAGCTGAAAAAGCTGCTGATGAGAGTGAGAGAGGTATGAAGGTTATTGAAAACCGGG
CCTTAAAGATGAAGAAAAGATGGAACCTCAGGAAATCCAACCTCAAAGAAGCTAAGCACATTGCAGAAGAGGCAGA
TAGGAAGTATGAAGAGGTGGCTCGTAAGTTGGTGATCATTGAAGGAGACTTGGAACCGCACAGAAGGAACGAGCTT
GAGCTTGGCAAAAGTCCCGTTGCCAGAGATGGGATGAACCAGATTAGACTGATGGACCANAACC

13726.1&2

AGGGGCNGCGGGTGCGTGGGCCACTGGGTGACCGACTTAGCCTGGCCAGACTCTCAGCACCTGGAAGCGCCCCGAG
AGTGACAGCGTGAGGCTGGGAGGGAGGACTTGGCTTGAGCTTGTTAACTCTGCTCTGAGCCTCCTTGTCGCTGC
ATTTAGATGGCTCCCGCAAAGAAGGGTGGCGAGAAGAAAAAGGGCCGTTCTGCCATCAACGAAGTGGTAACCCGAG
AATACACCATCAACATTCACAAGCGCATCCATGGAGTGGGCTTCAAGAAGCGTGACCTCGGGCACTCAAAGAGAT
TCGGAATTTGCCATGAAGGAGATGGGAACCTCAGATGTGCGCATTGACACCAGGCTCAACAAAGCTGTCTGGGCC
AAAGGAATAAGGAATGTGCCATACCGAATCCGGTGTGCGGCTGTCCAGAAAACGTAATGAGGATGAAGATTACCA
AATAAGCTATATACTTTGGTTACCTATGTACCTGTTACCACTTTCAAAAATCTACAGACAGTCAATGTGGATGAGA
ACTAATCGCTGATCGTCAGATCAAATAAAGTTATAAAAT

Fig. 150

13727.1

TCGGGAGCCACACTTGGCCCTCTTCCTCTCCAAAGSGCCAGAACCTCCTTCTCTTTGGAGAATGGGGAGGCCTCTT
GGAGACACAGAGGGTTTACCTTGGATGACCTCTAGAGAAATTGCCCAAGAAGCCCACCTTCTGGTCCCAACCTGC
AGACCCACAGCAGTCAGTTGGTCAGGCCCTGCTGTAGAAGGTCACTTGGCTCCATTGCCTGCTTCCAACCAATGG
GCAGGAGAGAAGGCCTTTATTTCTCGCCACCCATTCTCTGTACCAGCACCTCCGTTTTTCAGTCAGTGTTGTCC
AGCAACGGTACCGTTTACACAGTCACCTCAGACACACCATTTACCTCCCTTGCCAAGCTGTTAGCCTTAGAGTGA
TTGCAGTGAACACTGTTTACACACCGTGAATCCATTCCCATCAGTCCATTCCAGTTGGCACCAGCCTGAACCATTT
GGTACCTGGTGTTAACTGGAGTCCTGTTTACAAGGTGGAGTCGGGGCTTGCTGACTTCTCTTCATTTGAGGGCAC

13727.2

ACCTAGACAGAAGGTGGGTGAGGGAGGACTGGTAGGAGGCTGAGGCAATTCCTTGGTAGTTTGTCTGAAACCCTA
CTGGAGAAGTCAGCATGAGGCACCTACTGAGAGAAGTGCCAGAAACTGCTGACTGCATCTGTTAAGAGTTAACAG
TAAAGAGGTAGAAGTGTTTCTGAATCAGAGTGGAAGCGTCTCAAGGGTCCCACAGTGGAGGTCCCTGAGCTACC
TCCCTTCCGTGAGTGGGAAGAGTGAAGCCCATGAAGAACTGAGATGAAGCAAGGATGGGGTTCCTGGGCTCCAGGC
AAGGGCTGTGCTCTCTGCAGCAGGGAGCCCCACGAGTCAGAAGAAAAGAACTAATCATTTGTTGCAAGAAACCTTG
CCCGGATACTAGCGGAAAACTGGAGGCGNGGTGGGGGCACAGGAAAGTGGAAGTGATTTGATGGAGAGCAGAGAA
GCCTATGCACAGTGGCCGAGTCCACTTGTAAGTG

13728.1&2

TTCAAGCAATTGTAACAAGTATATGTAGATTAGAGTGAGCAAAATCATATACAATTTTCATTTCCAGTTGCTATTT
TCCAAATTGTTCTGTAATGTCGTTAAAATTACTTAAAAATTAACAAAGCCAAAAATTATATTTATGACAAGAAAGC
CATCCCTACATTAATCTTACTTTTCCACTACCGGCCCATCTCCTTCCTCTTTTTCTTAACCTATGCCATTAAAACT
GTTCTACTGGGCCGGGCGTGTGGCTCATGCCTGTAATCCCAGCATTTTGGGAGGCCAAGGCAGGCGGATCATGAGG
TCAAGAGATTGAGACCATCCTGGCCAACATGGTGAAACCCCGCCTCGACTAAGAATACAAAAATTAGCTGGGCATG
GTGGCGCATGCCTGTAGTCTCAGCTACTCGGGAGGCTGAGGCAGAAGAATCGCTTGAACCCGGGAGGCAGAGGATG
CAGTGAGCCCCGATCGCGCCACTGCACTCTAGCCTGGGCGACAGACTGAGACTCTGCTC

13731.1&2

TGTGCCAGTCTACAGGCCTATCAGCAGCGACTCCTTCAGCAACAGATGGGGTCCCCTGTTGAGCCCAACCCCATGA
GCCCCCAGCAGCATATGCTCCCAAATCAGGCCAGTCCCCACACCTACAAGGCCAGCAGATCCCTAATTCTCTCTC
CAATCAAGTGCGCTCTCCCCAGCCTGTCCCTTCTCCACGGCCACAGTCCCAGCCCCCCCCACTCCAGTCTTCCCCA
AGGATGCAGCCTCAGCCTTCTCCACACCACGTTTCCCCACAGACAAGTTCCCCACATCCTGGACTGGTAGTTGCC
AGGCCAACCCCATGGAACAAGGGCATTGTCAGCC

Fig. 15P

13734.1&2

TGTA AAAA ACTTGT TTTTAA TTTTGT ATAAATAAAGGTGGTCCATGCCACGGGGGCTGTAGGAAATCCAAGCAGACCA
GCTGGGGTGGGGGATGTAGCCTACCTCGGGGACTGTCTGTCTCAAAACGGGCTGAGAAGGCCCGTCAGGGGCCAG
GTCCACAGAGAGGCCTGGGATACTCCCCAACCCGAGGGGCAGACTGGGCAGTGGGGAGCCCCATCGTGCCCCAGAG
GTGGCCACAGGCTGAAGGAGGGGCTGAGGCACCGCAGCCTGCAACCCCCAGGGCTGCAGTCCACTAACTTTTACAGA
ATAAAAGGAACATGGGGATGGGGAAAAAGCACCAGGTGAGGCAGGGCCCGAGGGCCCCAGATCCCAGGAGGGCCAGGA
CTCAGGATGCCAGCACCCCTAGCAGCTCCACAGCTCCTGGCACAGGAGGCCGCCACGGATTGGCACAGGCCGCTGC
TGGCCATCACGCCACATTTGGAGAACTTGTCCCGACAGAGGTGAGCTCGGAGGAGCTCCTCGTGGGCACACACTGTACG
AACACAGATCTCCTTGTTAATGACGTACACACGGCGGAGGCTGCGGGGACAGGGCACGGGAGGTCTCAGCCCCACTT

13736.2

ATGGCTGCTGGATTTAGGTGGTAATAGGGGCTGTGGGCCATAAATCTGAAGCCTTGAGAACCTTGGGTCTGGAGAGCCA
TGAAGAGGGAAGGAAAAGAGGGCAAGTCTGAACCTAACCAATGACCTGATGGATTGCTCGACCAAGACACAGAAGTGA
AGTCTGTGTCTGTGCACTTCCACAGACTGGAGTTTTTGGTGTGAATAGAGCCAGTTGCTAAAAAATTGGGGGTTGG
TGAAGAAATCTGATTGTTGTGTGATTCAATGTGTGATTTTAAAAATAAACAGCAACAACAATAAAACCCCTGACTGGC
TGTTTTTCCCTGTATTCTTTACAATATTTTTTGACCCTCTGAAAAATTATTATACTTCACCTAAATGGAAGACTGCTG
TGTTTGTGGAAATTTTGTAAATTTTTAATTTATTTTATTCTCTCTCTTTTATTTTGCCTGCAGAATCCGTTGAGAGA
CTAATAAGGCTTAATATTTAATTGATTTGTTAATATGTATATAAAT

13744.2-13696.2

GGCATGCGAGCGCACTCGGCGGACGCAAGGGCGGCGGGGAGCACACGGAGCACTGCAGGCGCCGGGTTGGGACAGCGTG
TTCGCTGCTGCTGGATAGTCGTGTTTTCGGGGATCGAGGATACTCACCAGAAACCGAAAATGCCGAAACCAATCAATGT
CCGAGTTACCACCATGGATGCAGAGCTGGAGTTTGCAATCCAGCCAAATACAACCTGGAAAACAGCTTTTTGATCAGGTG
GTAAAGACTATCGGCCTCCGGGAAGTGTGGTACTTTGGCCTCCACTATGTGGATAATAAAGGATTTCTACCTGGCTGA
AGCTGGATAAGAAGGTGTCTGCCAGGAGGTGAGGAAGGAGAATCCCTCCAGTTCAAGTTCCGGGGCCAAAGTTCTACC
CTGAAGATGTGGCTGAGGAGCTCATCCAGGACATCACCAGAAACTTTTCTTCTTCAAGTGAAGGAAGGAATCCTTAG
CGATGAGATCTACTGCCCCCTTGARACTGCCGTGCTCTTGGGGTCTACGCTTGTGCATGCCAAGTTTGGGGACTACC
ACCAAGAAG

13746.1&2-13720.1&2

GAAGGAGTCGGGATACTCAGCATTGATGCACCCCAATTTCAAAGCGGCATTCTTCGGCAGGTCTCTGGGACAATCTCTA
GGGTCACTACCTGGAACTCGTTAGGGTACAACCTGAATGCTGAAAGGAAAGAACACCTGCAGAACCGGACAGAAATTCA
CCCCGGCGATCAGCTGATTGATCTCGGTGACACAGAAGTCATGGCTAAAGATGACGAGGACGTTGTCAATTCCTGGGC
TTTTCGAAGTGAGTCCAGCAGCAGTCTGAGGTATTCGGGCCGGTTATGCACCTGGACCACCAGCACCAGCTCCCGGGG
GCCAGGTGCCAGCCTTATCTACATTCTCAGGGTCTGATCAAAGTTCAGCTGGTACACCAGGGACCGGTACCGCAGCG
TCAGGTTGTCCGCTCGGGCTGGGGGACCGCCGGGACAGGGAAGCCGCCGACACGTTGGAGACCCTGCGGATGCCACA
GCCACAGAGGGGTGGTCCCCACCGCGGCCGCCGGCACCCCGCGGGTTCGGCGTCCAGCAACGGTGGGGCGAGGGCCT
CGTTCTTCTTTGTGCCCCATTGCTGCTCCAGAGGACGAAGCCGACGGCGGCCACCACGAGCGTCAGGATTAGCACCTT
CCGTTTGTAGATGCCGAACCTCATGGTCTCCAGGGCGGGGAGCGCAGCTACAGCTCGAGCGTCGGCGCCGCCGCTAGGA
GCCGCGGCTCGGCTTCGTCTCCGTCTCTCATTACGACACACGGGTCCCGAAAAAGTCTAGCCSCGGTCCCAACCGC
ACCCTAGCTTCGTTACCTGCGCCTCGCTTG

14347.1

CAGATTTTATTTGCAGTCGTCAGTGGGGCCGTTTCTTGCTGCTTATTTGTCTGCTAGCCTGCTCTTCCAGCTGCA
TGGCCAGGCGCAAGGCCTTGATGACATCTCGCAGGGCTGAGAAATGCTTGGCTTGCTGGGCCAGAGCAGATTCCGC
TTTGTTACAAAGGTCTCCAGGTCATAGTCTGGCTGCTCGGTATCTCAGAGAGCTCAAGCCAGTCTGGTCTTTGC
TGTATGATCTCCTTGAGCTCTTCCATAGCCTTCTCCTCCAGCTCCCTGATCTGAGTCATGGCTTCGTTAAAGCTGG
ACATCTGGGAAGACAGTTTCTCCTCTTCTTGGATAAATTGCCTGGAATCAGCGCCCCGTTAGAGCAGGCTTCCAT
CTCTTCTGTTTCCATTTGAATCAACTGCTCTCCACTGGGGCCACTGTGGGGGCTCAGCTCCTTGACCCTGCTGCAT
ATCTTAAGGGTGTTTAAAGGATATTCACAGGAGCTTATGCCTGGT

14347.2

CTCCTCTTGGTACATGAACCCAAGTTGAAAGTGGACTTAACAAAGTATCTGGAGAACCAAGCATTCTGCTTTGACT
TTGCATTTGATGAAACAGCTTCGAATGAAGTTGTCTACAGGTTACAGCAAGGCCACTGGTACAGACAATCTTTGA
AGGTGGAAAAGCAACTTGTTTTGCATATGGCCAGACAGGAAGTGGCAAGACACATACTATGGGCGGAGACCTCTCT
GGGAAAGCCCAGAATGCATCCAAAGGGATCTATGCCATGGCCTTCCGGGACGTCTTCTTCTGAAGAATCAACCCTG
CTACCGGAAGTTGGGCCTGGAAGTCTATGTGACATTCTTCGAGATCTACAATGGGAAGCTGTTTGACCTGCTCAAC
AAGAAGGCCAAGCTTGCGCGTGCTGGAAGACGGCAAGCAACAGGTGCAAGTGGTGGGGGCTTGCAGGAACATCTGG
NTAACTCTGCTTGATGATGGCANTCAAGATGATCGACATGGGCAGCGCCTGCAGA

14348.2&14350.1&2

TCCCGAATTCAAGCGACAAATTGGAWAGTGAAATGGAAGATGCCTATCATGAACATCAGGCCAAATCTTTTGCGCCA
AGATCTGATGAGACGACAGGAAGAATTAAGACGCATGGAAGAATTCACAATCAAGAAATGCAGAAACGTAAAGAA
ATGCAATTGAGGCAAGAGGAGGAACGACGTAGAAGAGAGGAAGAGATGATGATTCGTCAACGTGAGATGGAAGAAC
AAATGAGGCGCCAAAGAGAGGAAAGTTACAGCCGAATGGGCTACATGGATCCACGGGAAAGAGACATGCCAATGGG
TGGCGGAGGAGCAATGAACATGGGAGATCCCTATGGTTCAGGAGGCCAGAAATTTCCACCTCTAGGAGGTGGTGGT
GGCATAGGTTATGAAGCTAATCCTGGCGTTCCACCAGCAACCATGAGTGGTTCCATGATGGGAAGTGACATGCGTA
CTGAGCGCTTTGGGCAGGGAGGTGCGGGGCTGTGGGTGGACAGGGTCTAGAGGAATGGGGCTGGAACCTCCAGC
AGGATATGGTAGAGGGAGAGAAGAGTACGAAGGC

14349.1&2

TTCGTGAAGACCCTGACTGGTAAGACCATCACTCTCGAAGTGGAGCCCGAGTGACACCATTGAGAATGTCAAGGCA
AAGATCCAAGACAAGGAAGGCATCCCTCCTGACCAGCAKAGGTTGATCTTTGCTGGGAAACAGCTGGAAGATGGAC
GCACCCTGTCTGACTACAACATCCAGAAAGAGTCCACCCTGCACCTGGTGCTCCGTCTCAGAGGTGGGATGCAAAAT
CTTCGTGAAGACCCTGACTGGTAAGACCATCACCTCGAGGTGGAGCCCAGTGACACCATCGAGAATGTCAAGGCA
AAGATCCAAGATAAGGAAGGCATCCCTCCTGATCAGCAGAGGTTGATCTTTGCTGGGAAACAGCTGGAAGATGGAC
GCACCCTGTCTGACTACAACATCCAGAAAGAGTCCACTCTGCACTTGGTCTGCGCTTGAGGGGGGGTGTCTAAGT
TTCCCTTTTAAAGTTTCAACAAATTTCAATTGCACTTTCCTTTCAATAAAGTTGTTGCATTCT

Fig. 15R

14352.1&2

GCGCGGGTGCGTGGGCCACTGGGTGACCGACTTAGCCTGGCCAGACTCTCAGCACCTGGAAGCGCCCCGAGAGTGA
CAGCGTGAGGCTGGGAGGGAGGACTTGGCTTGAGCTTGTTAACTCTGCTCTGAGCCTCCTTGTCGCCTGCATTTA
GATGGCTCCCGCAAAGAAGGGTGGCGAGAAGAAAAAGGGCGTTCTGCCATCAACGAAGTGGTAACCCGAGAATAC
ACCATCAACATTACAAGCGCATCCATGGAGTGGGCTTCAAGAAGCGTGCACCTCGGGCACTCAAAGAGATTGGGA
AATTTGCCATGAAGGAGATGGGAACTCCAGATGTGCGCATTGACACCAGGCTCAACAAAGCTGTCTGGGCCAAAGG
AATAAGGAATGTGCCATACCGAATCCGTGTGCGGCTGTCCAGAAAACGTAATGAGGATGAAGATTCACCAAATAAG
CTATATACTTTGGTTACCTATGTACCTGTTACCACTTTCAAAAATCTACAGACAGTCAATGTGGATGAGAACTAAT
CGCTGATCGT

14353.1

AATTCTTTATTTAAATCAACAACTCATCTTCTCAAGCCCCAGACCATGGTAGGCAGCCCTCCCTCTCCATCCCC
TCACCCACCCCTTAGCCACAGTGAAGGGAATGGAAAATGAGAAGCCACGAGGGCCCTGCCAGGGAAGGCTGCCC
CAGATGTGTGGTGAGCACAGTCAGTGCAGCTGTGGCTGGGGCAGCAGCTGCCACAGGCTCCTCCCTATAAATTAAG
TTCCTGCAGCCACAGCTGTGGGAGAAGCATACTTGTAGAAGCAAGGCCAGTCCAGCATCAGAAGGCAGAGGCAGCA
TCAGTGACTCCCAGCCATGGAATGAACGGAGGACACAGAGCTCAGAGACAGAACAGGCCAGGGGGAAGAAGGAGAG
ACAGAATAGGCCAGGGCATGGCGGTGAGGGA

14353.2

TGATGAATCTGGGTGGGCTGGCAGTAGCCCGAGATGATGGGCTCTTCTCTGGGGATCCCAACTGGTTCCTAAGAA
ATCCAAGGAGAATCCTCGGAACTTCTCGGATAACCAGCTGCAAGAGGGCAAGAACGTGATCGGGTTACAGATGGGC
ACCAACCGCGGGGCGTCTCANGCAGGCATGACTGGCTACGGGATGCCACGCCAGATCCTCTGATCCCACCCAGGC
CTTGCCCTGCCCTCCACGAATGGTTAATATATATGTAGATATATATTTTAGCAGTGACATTCCCAGAGAGCCCC
AGAGCTCTCAAGCTCCTTTCTGTCAAGGTGGGGGTTCAAGCCTGTCTGTACCTCTGAAGTGCCTGCTGGCATC
CTCTCCCCCATGCTTACTAATAACATTCCCTTCCCCATAGCC

17182.1&2

AGCGGAGCTCCCTCCCCTGGTGGCTACAACCCACACACGCCAGGCTCAGGCATCGAGCAGAACTCCAGCGACTGGG
TAACCACTGACATTAGGTGAAGGTGCGGGACACCTACCTGGATACACAGGTGGTGGGACAGACAGGTGTCATCCG
CAGTGTACGGGGGGCATGTGCTCTGTGTACCTGAAGGACAGTGAGAAGGTTGTGAGCATTTCCAGTGAGCACCTG
GAGCCTATCACCCCAACAAGAACAAGGTGAAAGTGATCCTGGGCGAGGATCGGGAAGCCACGGGCGTCTTAC
TGAGCATTGATGGTGAGGATGGCATTGTCCGTATGGACCTTGATGAGCAGCTCAAGATCCTCAACCTCCGCTTCCT
GGGGAAGCTCCTGGAAGCCTGAAGCAGGCAGGGCCGGTGGACTTCGTGGATGAAGAGTGATCCTCCTTCCCTTCCC
TGGCCCTTGGCTGTGACACAAGATCCTCCTGCAGGGCTAGGCGGATTGTTCTGGATTTCTTTTGTCTTTTCTTTT
AGGTTTCCATCTTTTCCCTCCCTGGTGCTCATTGGAATCTGAGTAGAGTCTGGGGGAGGGTCCCCACCTTCTGTA
CCTCCTCCCCACAGCTTGCTTTTGTGTACCGTCTTCAATAAAAAGAAGCTGTTTGGTCTA

17183.2

GGTTCACAGCACTGCTGCTTGTGTGTTGCCGGCCAGGAATTCAGGCTCACAAGGCTATCTTAGCAGCTCGTTCTC
CGGTTTTTAGTGCCATGTTTGAACATGAAATGGAGGAGAGCAAAAAGAATCGAGTTGAAATCAATGATGTGGAGCC
TGAAGTTTTTAAGGAAATGATGTGCTTCATTTACACGGGGAAGGCTCCAAACCTCGACAAAATGGCTGATGATTTG
CTGGCAGCTGCTGACAAGTATGCCCTGGAGCGCTTAAAGGTCATGTGTGAGGATGCCCTCTGCAGTAACCTGTCCG
TGGAGAACGCTGCAGAAATTCATCCTGGCCGACCTCCACAGTGCAGATCAGTTGAAAACCTCAGGCAGTGGATTT
CATCAACTATCATGCTTCGGATGTCTTGGAGACCTCTTGGG

17186.1&2

TCGTAGCCATTTTTCTGCTTCTTTGGAGAATGACGCCACACTGACTGCTCATTGTGCTTGGTTCCATGCCAATTGG
TGAAATAGAACCTCATCCGGTAGTGGAGCCGGAGGGACATCTTGTATCAACGGTGATGGTGCGATTTGGAGCATA
CCAGAGCTTGGTGTCTCGCCATACAGGGCAAAGAGGTTGTGACAAAGAGGAGAGATACGGCATGCCTGTGCAGCC
CTGATGCACAGTTCCTCTGCTGTGTACTCTCCACTGCCAGCCGGAGGGGCTCCCTGTCCGACAGATAGAAGATCA
CTTCCACCCCTGGCTTG

17187.1&2

TGGCACACTGCTCTTAAGAAACTATGAWGATCTGAGATTTTTTTGTGTATGTTTTTGACTCTTTTGAGTGGTAATC
ATATGTGTCTTTATAGATGTACATACCTCCTTGACAAATGGAGGGGAATTCATTTTCATCACTGGGAGTGTCTT
AGTGTATAAAAACCATGCTGGTATATGGCTTCAAGTTGTAAAAATGAAAGTGACTTTAAAAGAAAATAGGGGATGG
TCCAGGATCTCCACTGATAAGACTGTTTTTAAGTAACTTAAGGACCTTTGGGTCTACAAGTATATGTGAAAAAAT
GAGACTTACTGGGTGAGGAAATTCATTGTTTAAAGATGGTCGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTG
TTTTGTTTTTTAAGGGAGGGAATTTATTATTTACCGTTGCTTGAAATTACTGKGTAAATATATGTYTGATAATGAT
TTGCTYTTTGVMACATAAAATTAGGVCTGTATAAGTWCTARATGCMTCCTGGGKGTGATYTTCCMAGATATTGA
TGATAMCCCTTAAATTTGTAACCYGCCTTTTCCCTTTGCTYTCMATTAAAGTCTATTCTMAAAG

17191.1&89.1

GGGGGTAGGCTCTTTATTAGACGGTTATTGCTGTACTACAGGGTCAGAGTGCAGTGTAAGCAGTGTGAGAGGCCCG
CGTTCAGCCCAAGAATGTGGATTTTCTCTCCCTATTGATCACAGTGGGTGGGTTTCTTCAGAAAAGCCCCAGAGGC
AGGGACCACTGAGCTCCAAGGTTAGAAGTGGAACTGGAAGGCTTCAGTCACATGCTGCTTCCACGCTTCCAGGCTG
GGCAGCAAGGAGGAGATGCCCATGACGTGCCAGGTCTCCCATCTGACACCAGTGAAGTCTGGTAGGACAGCAGCC
GCACGCCTGCCTCTGCCAGGAGGCCAATCATGGTAGGCAGCATTGCAGGGTCAGAGGTCTGAGTCCGGAATAGGAG
CAGGGGCAGGTCCCTGCGGAGAGGCACTTCTGGCCTGAAGACAGCTCCATTGAGCCCTGCAGTACAGGYGTAGTG
CCTTGGACCAAGCCACAGCCTGGTAAGGGGCGCCTGCCAGGGCCACGGCCAGGAGGCA

17192.1&2

TAATTTCTTAGTCGTTTGAATCCTTAAGCATGCAAAAGCTTTGAACAGAAGGGTTCACAAAGGAACCAGGGTTGT
CTTATGGCATCCAGTTAAGCCAGAGCTGGGAATGCCTCTGGGTCATCCACATCAGGAGCAGAAGCACTTGACTTGT
CGGTCCTGCTGCCACGGTTTGGGCGCCACCACGCCACGTCCACCTCGTCCCTGCCGCCACGTCTGGGCG
GCCAAGGTCTCCAAAATTGATCTCCAGCTGAGACGTTATATCATTTGCTGGCTTCCGGAATGATGGTCCATAACC
GAATCTTCAGCATGAGCCTCTTCACTCTTTGATTTATGAAGAACAAATCCCTTCTTCCACTGCCCATCAGCACCTT
CATTTGGTTTTTCGGATATTAAATTCTACTTTTGGCCGGTCCTTATTTTGAATAGCCTTCCACTCATCCAAAGTCAT
CTCTTTTGGACCCTCCTCTTTTACCTCTTCAACTTCATTCTCCTTATTTTCAGTGTCTGCCACTGGATGATGTTCT
TCACCTTCAGGTGTTTCTCAGTCACATTTGATTGATCCAAGTCAGTTAATTCGTCTTTGACAGTTCCCCAGTTGT
GAGATCCGCTACCTCCACGTTTGTCTCGTGCTTCAGGCCAGATCTACTTCCACTATGCCTATCAAATTCAGG
TTTGCCACGAGAATCAAATCCATCTCCTCGGCCATTCCACGTCCACGGCCCCCTCGACCTCTTCCAAGACCACCA
CGACCTCGAATAGGTCGGTCAATAATCGGTCTATCAACTGAAAATTCGCTCCTTACCCTTTTCTTCAAGTGGCT
TTTCGAATCTTCGTTACGAGGTGGTCGCCTTTCTGGTCTTCTATCAATTATTTCCCTTACCCTGAAGTTGTTG
ATCAGGTCTTCTTCCAACCTCGTGC

17193

AAGCGGATGGACCTGAGTCAGCCGAATCCTAGCCCCCTCCCTTGGGCCTGCTGTGGTGCTCGACATCAGTGACAGA
CGGAAGCAGCAGACCATCAAGGCTACGGGAGGCCCGGGCGCTTGCGAAGATGAAGTTTGGCTGCCTCTCCTTCCG
GCAGCCTTATGCTGGCTTTGTCTTAAATGGAATCAAGACTGTGGAGACGCGCTGGCGTCCTCTGCTGAGCAGCCAG
CGGAAGTGTACCATCGCCGTCCACATTGCTCACAGGGACTGGGAAGGCGATGCCTGTGCGGGAGCTGCTGGTGGAGA
GACTCGGGATGACTCCTGCTCAGATTCAAGCCTTGCTCAGGAAAGGGGAAAAGTTTGGTCGAGGAGTGATAGCGGG
ACTCGTTGACATTGGGGAAACTTTGCAATGCCCCGAAGACTTAACTCCCGATGAGGTTGTGGAACTAGAAAATCAA
GCTGCACTGACCAACCTGAAGCAGAAGTACCTGACTGTGATTTCAAACCCCAGGTGGTTACTGGAGCCCATACCTA
GGAAAGGAGGCAAGGATGTATTCCAGGTAGACATCCAGAGCACCTGATCCCTTTGGGGCATGAAGTGTGACAAGT
GTGGGCTCCTGAAAGGAATGTTCCRGAGAAACCAGCTAAATCATGGCACCTTCAATTTGCCATCGTGACGCAGACC
TGTATAAATTAGGTTAAAGATGAATTTCCACTGCTTTGGAGAGTCCCACCCACTAAGCACTGTGCATGTAAACAGG
TTCCTTTGCTCAGATGAAGGAAGTAGGGGTGGGGCTTTCCTTGTGTGATGCCTCCTTAGGCACACAGGCAATGTC
TCAAGTACTTTGACCTTAGGGTAGAAGGCAAGCTGCCAGTAAATGTCTCAGCATTGCTGCTAATTTTGGTCTGC
TAGTTTCTGGATTGTACAAATAAATGTGTTGTAGATGA

Fig. 15U

16443.1.edit

TCGAGCGGCCCGCCGGGCAGGTGTCGGAGTCCAGCACGGGAGGCGTGGTCTTGTAGTTGTTCTCCGGCTGCCATT
GCTCTCCCACTCCACGGCGATGTCGCTGGGATAGAAGCCTTTGACCAGGCAGGTGAGGCTGACCTGGTTCTTGGTC
ATCTCCTCCCGGGATGGGGGCAGGGTGTACACCTGTGGTTCTCGGGGCTGCCCTTTGGCTTTGGAGATGGTTTTCT
CGATGGGGGCTGGGAGGGCTTTGTTGGAGACCTTGCACTTGTACTCCTTGCCATTCAACCAGTCCTGGTGCANGAC
GGTGAGGACGCTNACCACACGGTACGNGCTGGTGTACTGCTCCTCCCGCGGCTTTGTCTTGGCATTATGCACCTCC
ACGCCGTCCACGTACCAATTGAACTTGACCTCAGGGTCTTCGTGGCTCACGTCCACCACCACGCATGTAACCTCAA
ANCTCGGNCGCGANACGC

16443.2.edit

AGCGTGGTCGCGGCCGAGGTCTGAGGTTACATGCGTGGTGGTGGACGTGAGCCACGAAGACCCTGAGGTCAAGTTC
AACTGGTACGTGGACGGCGTGGAGGTGCATAATGCCAAGACAAAGCCGCGGGAGGAGCAGTACAACAGCACGTACC
GTGTGGTCAGCGTCCTCACCGTCCTGCACCAGGACTGGCTGAATGGCAAGGAGTACAAGTGAAGGTCTCCAACAA
AGCCCTCCCAGCCCCATCGAGAAAACCATCTCCAAAGCCAAAGGGCAGCCCCGAGAACCACAGGTGTACACCTG
CCCCCATCCCGGGAGGAGATGACCAAGAACCAGGTGAGCCTGACCTGCCTGGTCAAAGGCTTCTATCCCAGCGACA
TCGCCCCGTGGAGTGGGAGAGCAATGGGCAGCCGGAGAACAACCTACAAGACCACGCCTCCCGTGCTGGACTCCGACA
CCTGCCGGGCGGCCGCTCGA

16444.2.edit

AGCGTGGTTNCGGCCGAGGTCCCAACCAAGGCTGCANCCTGGATGCCATCAAAGTCTTCTGCAACATGGAGACTGG
TGAGACCTGCGTGTACCCCACTCAGCCCACTGTGGCCAGAGAAGAACTGGTACATCAGCAAGAACCCCAAGGACAAG
AGGCATGTCTGGTTCGGCGAGAGCATGACCGATGGATTCCAGTTCGAGTATGGCGGCCAGGGCTCCGACCCTGCCG
ATGTGGACCTGCCCCGGGCGGNCGCTCGA

16445.1.edit

AGCGTGGTCGCGGCCGAGGTCAAGAACCCCGCCCGCACCTGCCGTGACCTCAAGATGTGCCACTCTGACTGGAAGA
GTGGAGAGTACTGGATTGACCCCAACCAAGGCTGCAACCTGGATGCCATCAAAGTCTTCTGCAACATGGAGACTGG
TGAGACCTGCGTGTACCCCACTCAGCCCACTGTGGCCAGAGAAGAACTGGTACATCAGCAAGAACCCCAAGGACAAG
AGGCATGTCTGGTTCGGCGAGAGCATGACCGATGGATTCCAGTTCGAGTATGGCGGCCAGGGCTCCGACCCTGCCG
ATGTGGACCTGCCCCGGGCGGCCGCTCGA

16445.2.edit

TCGAGCGGTCGCCCCGGGCAGGTCCACATCGGCAGGGTCGGAGCCCTGGCCGCCATACTCGAACTGGAATCCATCGG
NCATGCTCTCGCCGAACCAGACATGCCTCTTGNCCTTGGGGTTCTTGCTGATGTACCAGNTCTTCTGGGCCACACT
GGGCTGAGTGGGGTACACGCAGGTCTCACCANTCTCCATGTTGCANAAGACTTTGATGGCATCCAGGTTGCAGCCT
TGGTTGGGGTCAATCCAGTACTCTCCACTCTTCCAGACAGAGTGGCACATCTTGAGGTCACGGCAGGTGCGGGCGG
GGTTCTTGACCTCGGTGCGGACCACGCT

16446.1.edit

TCGAGCGGCCGCCCCGGGCAGGTCCTCCTCAGAGCGGTAGCTGTTCTTATTGCCCCGGCAGCCTCCATAGATNAAGT
TATTGCANGAGTTCTCTCCACGTCAAAGTACCAGCGTGGGAAGGATGCACGGCAAGGCCAGTGACTGCGTTGGC
GGTGCAGTATTCTTCATAGTTGAACATATCGCTGGAGTGGACTTCAGAATCCTGCCTTCTGGGAGCACTTGGGACA
GAGGAATCCGCTGCATTCTGCTGGTGGACCTCGGCCGCGACCACGCT

16446.2.edit

AGCGTGGTCGCGGCCGAGGTCCACCAGCAGGAATGCAGCGGATTCTCTGTCCCAAGTGCTCCCAGAAGGCAGGAT
TCTGAAGACCACTCCAGCGATATGTTCAACTATGAAGAATACTGCACCGCCAACGCAGTCACTGGGCCTTGCCGTG
CATCCTTCCACGCTGGTACTTTGACGTGGAGAGGAACCTCTGCAATAACTTCATCTATGGAGGCTGCCGGGGCAA
TAAGAACAGCTACCGCTCTGAGGAGGACCTGCCCGGGCGGCCGCTCGA

16447.1.edit

TCGAGCGGCCGCCCCGGGCAGGTCCACATCGGCAGGGTCGGAGCCCTGGCCGCCATACTCGAACTGGAATCCATCGG
TCATGCTCTCGCCGAACCAGACATGCCTCTTGTCCTTGGGGTTCTTGCTGATGTACCAGTTCTTCTGGGCCACACT
GGGCTGAGTGGGGTACACGCAGGTCTCACCAGTCTCCATGTTGCAGAAGACTTTGATGGCATCCAGGTTGCAGCCT
TGGTTGGGGTCAATCCAGTACTCTCCACTCTTCCAGCCAGAATGGCACATCTTGAGGTCACGGCANGTGCGGGCGG
GGTTCTTGACCTCGGCCGCGACCACGCT

16447.2.edit

AGCGTGGTCGCGGCCGAGGTCAAGAAACCCCGCCCGCACCTGCCGTGACCTCAAGATGTGCCACTCTGGCTGGAAG
AGTGGAGAGTACTGGATTGACCCCAACCAAGGCTGCAACCTGGATGCCATCAAAGTCTTCTGCAACATGGAGACTG
GTGAGACCTGCGTGTACCCCACTCAGCCAGTGTGGCCCAAGAAGTGGTACATCAGCAAGAACCCCAAGGACAA
GAGGCATGTCTGGCTCGGCGAGAGCATGACCGATGGATTCCAGTTCGAGTATGGCGGCCAGGGCTCCGACCCTGCC
GATGTGGACCTGCCCGGGCGGCCGCTCGA

16449.1.edit

AGCGTGGTCGCGGCCGAGGTCCTGTCAGAGTGGCACTGGTAGAAGNTCCAGGAACCCTGAACTGTAAGGGTTCTTC
ATCAGTGCCAACAGGATGACATGAAATGATGTACTCAGAAGTGTCTGNAATGGGGCCCATGANATGGTTGNCTGA
GAGAGAGCTTCTTGTCCTACATTGGCGGGTATGGTCTTGGCCTATGCCTTATGGGGGTGGCCGTTGNGGGCGGTG
NGGTCCGCCTAAAACCATGTTCTCAAAGATCATTTGTTGCCCAACACTGGGTGCTGACCANAAGTGCCAGGAAG
CTGAATACCATTTCCAGTGTACATCCAGGGTGGGTGACGAAAGGGGTCTTTTGAAGTGTGGAAGGAACATCCAAG
ATCTCTGNTCCATGAAGATTGGGGTGTGGAAGGGTTACCAGTTGGGGAAGCTCGCTGTCTTTTCTTCCAATCAN
GGGCTCGCTCTTCTGAATATTCTTCAGGGCAATGACATAAATTGTATATTCGGTTCGCGTTCAGGCCAG

16450.1.edit

TCGAGCGGCCGCGCGGGCAGGTCCACCACACCCAATTCTTGCTGGTATCATGGCAGCCGCCACGTGCCAGGATTA
CCGGCTACATCATCAAGTATGAGAAGCCTGGGTCTCCTCCCAGAGAAGTGGTCCCTCGGCCCGCCCTGGTGTAC
AGAGGCTACTATTACTGGCCTGGAACCGGAACCGAATATACAATTTATGTCATTGCCCTGAAGAATAATCAGAAG
AGCGAGCCCCTGATTGGAAGGAAAAAGACAGACGAGCTTCCCCAACTGGTAACCCTTCACACCCCAATCTTCATG
GACCAGAGATCTTGGATGTTCTTCCACAGTTCAAAAGACCCCTTTCGTCACCACCCCTGGGTATGACACTGGAAA
TGGTATTAGCTTCTTGGCACTTCTGGTCAGCAACCCAGTGTGGGCAACAAATGATCTTTGANGAACATGGNTTT
AGGCGGACCACACCGGCCACAACGGGCACCCCATTAAGGCATAGGCCAAGAACATACCCGNCGAATGTAGGACAAG
AAGCTCTNTCTCANACAANCATCTCATGGGCCCATTCANGACACTTCTGAGTACATCANTTCATGGCATCCTGG
TGGCACTGATAAAAACCCCTTACAGTTA

16450.2.edit

AGCGTGGTCGCGGGCGAGGTCCTGTCAGAGTGGCACTGGTAGAAGTTCCAGGAACCCTGAACTGTAAGGGTTCTTC
ATCAGTGCCAACAGGATGACATGAAATGATGTACTCAGAAGTGTCTGGAATGGGGCCCATGAGATGGTTGTCTGA
GAGAGAGCTTCTTGTCCTACATTGGCGGGTATGGTCTTGGCCTATGCCTTATGGGGGTGGCCGTTGTGGGCGGTG
TGGTCCGCCTAAAACCATGTTCTCAAAGATCATTTGTTGCCCAACACTGGGTGCTGACCAGAAGTGCCAGGAAG
CTGAATACCATTTCCAGTGTACATCCAGGGTGGGTGACGAAAGGGGTCTTTTGAAGTGTGGAAGGAACATCCAAG
ATCTCTGGTCCATGAAGATTGGGGTGTGGAAGGGTTACCAGTTGGGGAAGCTCGTCTGTCTTTTCTTCCAATCA
NNGGCTCGCTCTTCTGATTATTCTTCAGGGCAATGACATAAATTGTATATTCGGNTCCCGGGTNCAGCCAATAATA
ATAACCCTCTGTGACACCANGGCGGGGCCGAAGGANCAT

16451.1.edit

AGCGTGGTCGCGGCCGAGGTCCTCACCAGAGGTACCACCTACAACATCATAGTGGAGGCACTGAAAGACCAGCAGA
GGCATAAGGTTTCGGGAAGAGGTTGTTACCGTGGGCAACTCTGTCAACGAAGGCTTGAACCAACCTACGGATGACTC
GTGCTTTGACCCCTACACAGTTTCCCATTATGCCGTTGGAGATGAGTGGGAACGAATGTCTGAATCAGGCTTTAA
CTGTTGTGCCAGTGCTTANGCTTTGGAAGTGGTCATTTTCAGATGTGATTCATCTAGATGGTGCCATGACAATGGTG
TGA ACTACAAGATTGGAGAGAAGTGGGACCGTCAGGGAGAAAATGGACCTGCCCGGGCGGCCGCTCGA

16451.2.edit

TCGAGCGGCCGCCCCGGGCAGGTCCATTTCTCCCTGACGGTCCCACTTCTCTCCAATCTTGTAGTTCACACCATTG
TCATGGCACCATCTAGATGAATCACATCTGAAATGACCACTTCCAAAGCCTAAGCACTGGCACAACAGTTTAAAGC
CTGATTCAGACATTCGTTCCCACTCATCTCCAACGGCATAATGGGAACTGTGTAGGGGTCAAAGCACGAGTCATC
CGTAGGTTGGTTCAAGCCTTCGNTGACAGAGTTGCCACGGTAACAACCTCTTCCCGAACCTTATGCCTCTGCTGG
TCTTTCAGTGCCTCCACTATGATGTTGTAGGTGGTACCTCTGGTGAGGACCTCGGCCGCGACCACGCT

16452.1.edit

AGCGTGGCCGCGGCCGAGGTCCATTGGCTGGAACGGCATCAACTTGGAAGCCAGTGATCGTCTCAGCCTTGGTTCT
CCAGCTAATGGTGATGGNGGTCTCAGTAGCATCTGTCACACGAGCCCTTCTTGGTGGGCTGACATTCTCCAGAGTG
GTGACAACACCCTGAGCTGGTCTGCTTGTCAAAGTGTCTTAAGAGCATAGACACTCACTTCATATTTGGCGNCCA
CCATAAGTCCTGATACAACCACGGAATGACCTGTCAGGAAC

16452.2.edit

TCGAGCGGCCGCCCCGGGCAGGTCTCAGACCGGGTTCTGAGTACACAGTCAGTGTGGTTGCCTTGACGATGATAT
GGAGAGCCAGCCCCTGATTGGAACCCAGTCCACAGCTATTCTGCACCAACTGACCTGAAGTTCACTCAGGTCACA
CCCACAAGCCTGAGCGCCCAGTGGACACCACCCAATGTTTCAGCTCACTGGATATCGAGTGCGGGTGACCCCCAAGG
AGAAGACCGGACCAATGAAAGAAATCAACCTTGCTCCTGACAGCTCATCCGTGGTTGTATCAGGACTTATGGCGGC
CACCAAATATGAAGTGAGTGTCTATGCTCTTAAGGACACTTTGACAAGCAGACCAGCTCAGGGTGTTGTCACCACT
CTGGAGAATGTCAGCCACCAAGAAGGGCTCGTGTGACAGATGCTACTGAGACCACCATCACCATTAGCTGGAGAA
CCAAGACTGAGACGATCACTGGCTTCCAAGTTGATGCCGTTCCAGCCAATGGACCTCGGCCGCGACCACGCTT

16453.1.edit

AGCGTGGTCGCGGCCGAGGTCTGGCCGAAGTCCAGTGTACAGGGAAGATGTACATGTTATAGNTCTTCTCGAAGT
CCCGGGCCAGCAGCTCCACGGGGTGGTCTCCTGCCTCCAGGCGTTCTCATTCTCATGGATCTTCTTCACCCGCAG
CTTCTGCTTCTCAGTCAGAAGGTTGTTGTCTCATCCCTCTCATACAGGGTGACCAGGACGTTCTTGAGCCAGTCC
CGCATGCGCAGGGGGAATTCGGTCAGCTCAGAGTCCAGGCAAGGGGGGATGTATTTGCAAGGCCCGATGTAGTCCA
AGTGGAGCTTGTGGCCCTTCTTGGTGGCCTCCAAGGTGCACTTTGTGGCAAAGAAGTGGCAGGAAGAGTCGAAGGT
CTTGTTGTCATTGCTGCACACCTTCTCAAACCTCGCCAATGGGGGCTGGGCAGACCTGCCCCGGCGGCCGCTCGA

16453.2.edit

TCGAGCGGCCCGCCGGGCAGGTCTGCCAGCCCCCATTGGCGAGTTTGTAGAAGGNGTGCAGCAATGACAACAAGAC
CTTCGACTCTTCTGCCACTTCTTTGCCACAAAGTGACCCCTGGAGGGCACCAAGAAGGGCCACAAGCTCCACCTG
GACTACATCGGGCCTTGCAAATACATCCCCCTTGCCTGGACTCTGAGCTGACCGAATTCCTTGGCATGCGGG
ACTGGCTCAAGAACGTCCTGGTCACCCTGTATGAGAGGGATGAGGACAACAACCTTCTGACTGAGAAGCANAAGCT
GCGGGTGAAGAANATCCATGAGAATGANAAGCGCCTGNAGGCANGAGACCACCCCGTGGAGCTGCTGGCCCCGGGAC
TTCGAGAAGAACTATAACATGTACATCTTCCCTGTACACTGGCAGTTCGGCCAGACCTCGGCCGCGACCACGCT

16454.1.edit

AGCGTGGNTGCGGACGACGCCCCACAAAGCCATTGTATGTAGTTTTANTTCAGCTGCAAANAATACCNCCAGCATCC
ACCTTACTAACCAGCATATGCAGACA

16454.2.edit

TCGAGCGGTGCCCCGGGCAGGTCTGGGCGGATAGCACCGGGCATATTTTGAATGGATGAGGTCTGGCACCCCTGAG
CAGCCCAGCGAGGACTTGGTCTTAGTTGAGCAATTTGGCTAGGAGGATAGTATGCAGCACGGTTCTGAGTCTGTGG
GATAGCTGCCATGAAGNAACCTGAAGGAGGCGCTGGCTGGTANGGGTTGATTACAGGGCTGGGAACAGCTCGTACA
CTTGCCATTCTCTGCATATACTGGNTAGTGAGGCGAGCCTGGCGCTCTTCTTTGCGCTGAGCTAAAGCTACATACA
ATGGCTTTGNGGACCTCGGCCGCGACCACGCTT

16455.1.edit

TCGAGCGGCCGCCCCGGGCAGGTCCATTTCTCCCTGACGGTCCCACTTCTCTCCAATCTTGTAGTTCACACCATTG
TCATGACACCATCTAGATGAATCACATCTGAAATGACCACTTCCAAAGCCTAAGCACTGGCACAACAGTTTAAAGC
CTGATTCAGACATTCGTTCCCACTCATCTCCAACGGCATAATGGGAACTGTGTAGGGGTCAAAGCACGAGTCATC
CGTAGGTTGGTTCAAGCCTTCGTTGACAGAAGTTGCCACGGTAACAACCTCTTCCCGAACCTTATGCCTCTGCTG
GTCTTTCAAGTGCCTCCACTATGATGTTGTAGGTGGCACCTCTGGTGAGGACCTCGGCCGCGACCACGCT

16455.2.edit

AGCGTGGTTTGC GGCCGAGGTCTCACCANAGGTGCCACCTACAACATCATAGTGGAGGCACTGAAAGACCAGCAG
AGGCATAAGGTTCCGGGAAGAGGTTGTTACCGTGGGCAACTCTGTCAACGAAGGCTTGAACCAACCTACGGATGACT
CGTGCTTTGACCCCTACACAGNTTCCATTATGCCGTTGGAGATGAGTGGGAACGAATGTCTGAATCAGGCTTTAA
ACTGTTGTGCCAGTGCTTANGCTTTGGAAGTGGTCATTTAGATGTGATTCATCTANATGGTGTGATGACAATGGT
GNGAACTACAAGATTGGAGAGAAGTGGNACCGTCAGGGGANAAAATGGACCTGCCCGGGCGGCNCGCTCGA

16456.1.edit

AGCGTGGTCGCGGCCGAGGTCTGGCTTNCTGCTCANGTGATTATCCTGAACCATCCAGGCCAAATAAGCGCCGGCT
ATGCCCTGNATTGGATTGCCACACGGCTCACATTGCATGCAAGTTTGCTGAGCTGAAGGAAAAGATTGATC

16456.2.edit

TCGAGCGGCCGCCCCGGGCAGGTCCAATTGAAACAAACAGTTCTGAGACCGTTCTTCCACCACTGATTAAGAGTGGG
GNGGCGGGTATTAGGGATAATATTCATTTAGCCTTCTGAGCTTTCTGGGCAGACTTGGTGACCTTGCCAGCTCCAG
CAGCCTTCTGGTCCACTGCTTTGATGACACCCACCGCAACTGTCTGTCTCATATCACGAACAGCAAAGCGACCCAA
AGGTGGATAGTCTGAGAAGCTCTCAACACACATGGGCTTGCCAGGAACCATATCAACAATGGGCAGCATCACCAGA
CTTCAAGAATTTAAGGGCCATCTTCCAGCTTTTTACCAGAACGGCGATCAATCTTTTCTTCAGCTCAGCAAACCTT
GCATGCAATGTGAGCCG

16459.1.edit

TCGAGCGGCCGCGGGCAGGTCCAGAGGGCTGTGCTGAAGTTTGCTGCTGCCACTGGAGCCACTCCAATTGCTGG
CCGCTTCACTCCTGGAACCTTCACTAACCAGATCCAGGCAGCCTTCCGGGAGCCACGGCTTCTTGTTGGNTACTGAC
CCCAGGGCTGACCACCAGCCTCTCACGGAGGCATCTTATGTTAACCTACCTACCATTGCGCTGTGTAACACAGATT
CTCCTCTGCGCTATGTGGACATTGCCATCCCATGCAACAACAAGGGAGCTCACTCAGNGGGGTTTGATGTGGTGGG
TGCTGGCTCGGGAAGTTCTGCGCATGCGTGGCACCATTTCCTGTAACACCCATGGGANGNCATGCCTGATCTGGA
CTTCTACAGAGATCCTGAAGAGATTGAAAAAGAAGAACAGGCTGNTTGCTGANAAAGCAAGTGACCAAGGANGAAA
TTTCANGGGTGAAANGGACTGCTCCCGCTCCTGAATTCAGTCTACTCAACCTGANGNTGCAGACTGGTCTTGAAG
GNGNACANGGGCCCTCTGGGCCTATTTAAGCANCTTCGGTCGCGAACACGNT

16459.2.edit

AGCGTGNGTCGCGGCCGAGGTGCTGAATAGGCACAGAGGGCACCTGTACACCTTCAGACCAGTCTGCAACCTCAGG
CTGAGTAGCAGTGAACCTCAGGAGCGGGAGCAGTCCATTACCCTGAAATTCCTCCTTGGNCACTGCCTTCTCAGCA
GCAGCCTGCTCTTCTTTTTCAATCTCTTCAGGATCTCTGTAGAAGTACAGATCAGGCATGACCTCCCATGGGTGTT
CACGGGAAATGGTGCCACGCATGCGCAGAACTTCCCGAGCCAGCATCCACCACATCAAACCCACTGAGTGAGCTCC
CTTGTTGTTGCATGGGATGGGCAATGTCCACATAGCGCAGAGGAGAATCTGTGTTACACAGCGCAATGGTAGGTAG
GTTAACATAAGATGCCTCCGCGAGAAGCTGGTGGTCAGCCCTGGGGTCAAGTAACCACAAGAAGCCGTGGCTCCCG
GAAGGCTGCCTGGATCTGGTTAGTGAAGGNTCCAGGAGTGAAGCGGCCAACAAATTGGAGTGGCTTCAGTGGCAAGC
AGCAAACCTTCAGCACAAAGCCCTCTGGACCTGCCCGCGGGCCGCTCGA

16460.1.edit

TCGAGCGGCCGCGGGCAGGTCCATTTCTCCCTGACGGNCCCACTTCTCTCCAATCTTGTTAGTTTACACCATTG
TCATGGCACCATCTAGATGAATCACATCTGAAATGACCACTTCCAAAGCCTAAGCACTGGCACAACAGTTTAAAGC
CTGATTCAGACATTCGTTCCCACTCATCTCCAACGGCATAATGGGAACTGTGTAGGGGTCAAAGCACGAGTCATC
CGTAGGTTGGTTCAAGCCTTCGTTGACAGAGTTGCCACGGTAACAACCTCNTCCCGAACCTTATGCCTCTGCTG
GGCTTTCAGNGCCTCCACTATGATGNTGTAGGGGGGCACCTCTGGNGANGACCTCGGCCGCGACCACGCT

16460.2.edit

AGCGTGGTCGCGGCCGAGGTCCACAGAGGTGCCACCTACAACATCATAGTGGAGGCACTGAAAGACCAGCAGA
GGCATAAGGCTCGGGAAGAGGTTGTTACCGTGGGCAACTCTGTCAACGAAGGCTTGAACCAACCTACGGATGACTC
GTGCTTTGACCCCTACACAGTTTCCATTATGCCGTTGGAGATGAGTGGGAACGAATGTCTGAATCAGGCTTTAAA
CTGTTGTGCCAGTGCTTANGCTTTGGAAGTGGGTCAATTCAGATGTGATTCATCTAGATGGTGCCATGACAATGGN
GNGAACTACAAGATTGGAGAGAAGTGGNACCGNCAGGGAGAAAATGGACCTGCCCGGGCGGCCGCTCGA

Fig. 15BB

16461.1.edit

AGCGTGGTCGCGGCCGAGGTCCACATCGGCAGGGTCGGAGCCCTGGCCGCCATACTCGAACTGGAATCCATCGGTC
ATGCTCTCGCCGAACCAGACATGCCTCTTGTCCTTGGGGTTCCTTGCTGATGTACCAGTTCTTCTGGGCCACACTGG
GCTGAGTGGGGTACACGCAGGTCTCACCAGTCTCCATGTTGCAGAAGACTTTGATGGCATCCAGGNTGCAACCTTG
GTTGGGGTCAATCCAGTACTCTCCACTCTTCCAGCCAGAGTGGCACATCTTGAGGTACGGCAGGTGCGGNCGGGG
GNTTTTGGGCTGCCCTCTGGNCTTCGGNTGTNCTCNATCTGCTGGCTCA

16461.2.edit

TCGAGCGGCCGCCCCGGGCAGGTCTCGCGGTGCACTGGTGATGCTGGTCCTGTTGGTCCCCCGGCCCTCCTGGAC
CTCCTGGCCCCCTGGTCCTCCCAGCGCTGGTTTTGACTTCAGCTTCCTGCCCCAGCCACCTCAAGAGAAGGCTCA
CGATGGTGGCCGCTACTACCGGGCTGATGATGCCAATGTGGTTCGTGACCGTGACCTCGAGGTGGACACCACCTC
AAGAGCCTGAGCCAGCAGATCGAGAACATCCGGAGCCCAGAGGGCAGNCGCAAGAACCCCGCCCGCACCTGCCGTG
ACCTCAAGATGTGCCACTCTGACTGGAAGAGTGGAGAGTACTGGATTGACCCCAACCAAGCTGCAACCTGGATGCC
ATCAAAGTCTTCTGCAACATGGAGACTGGTGAGACCTGCGTGTACCCCACTCAGCCAGTGTGGCCAAAAGAACT
GGTACATCAGCAAGAACCCCAAGGACAAGAAGCATGTCTGGTTCGGCGAGAACATGACCGATGGATTCCAGTTCGA
GTATGGCGGGCAGGGCTCCGACCCTGCCGATGGGGACCTTGGCCGCGAACACGCT

16463.1.edit

AGCGTGGNNGCGGCCGAGGTATAAATATCCAGNCCATATCCTCCCTCCACACGCTGANAGATGAAGCTGTNCAAAG
ATCTCAGGGTGGANAAAACCAT

16463.2.edit

TCGAGCGGCCGCCCCGGGCAGGTCTTCAGACTTGGACTGTGTCACTGCCAGGCTTCAGGGCTCCAACCTGCAG
ACGGCCTGTTGTGGGACAGTCTCTGTAATCGCGAAAGCAACCATGGAAGACCTGGGGGAAAACACCATGGTTTTAT
CCACCCTGAGATCTTTGAACAACTTCATCTCTCAGCGTGGGAGGGAGGCTCTGGACTGGATATTTCTACCTCGGC
CGGACACGCT

16464.1.edit

CGAGCGGGCGACCGGGCAGGTNCAGACTCCAATCCANANAACCATCAAGCCAGATGTCAGAAGCTACACCATCACA
GGTTTACAACCAGGCACTGACTACAAGANCTACCTGCACACCTTGAATGACAATGCTCGGAGCTCCCCTGTGGTCA
TCGACGCCTCCACTGCCATTGATGCACCATCCAACCTGCGTTTCTGGCCACCACACCCAATTCCTTGCTGGTATC
ATGGCAGCCGCCACGTGCCAGGATTACCGGTACATCATNAGTATGANAAGCCTGGGCCTCCTCCCAGAGAAGNGG
TCCCTCGGCCCCGCCCTGNTGTCCANAGGNTACTATTACTGNGCCNGCAACCGGAACCGATATCNATTTTGNCA
TTGGCCTTCAACAATAATTA

16464.2.edit

AGCGTGGTTCGCGGCCGANGTCCTGTGAGAGTGGCACTGGTAGAAGTTCCAGGAACCCTGAACTGTAAGGGTTCTT
CATCAGNGCCAACAGGATGACATGAAATGATGTACTCAGAAGTGTCTGGAATGGGGCCCATGAGATGGTTGTCTG
AGAGAGAGCTTCTTGNCTGTCTTTTTCTTCCAATCAGGGGCTCGCTCTTCTGATTATTCTTCAGGGCAATGACA
TAAATTGTATATTGCGGTCCCGNTCCAGGCCAGTAATAGTANCCTCTGTGACACCAGGGCGGNGCCGAGGGACCA
CTTCTCTGGGAGGAGACCCAGGCTTCTCATACTTGATGATGTAACCGGTAATCCTGGCACGTGGCGGCTGCCATGA
TACCAGCAAGGAATTGGGTGTGGTGGCCAGGAAACGCAGGTTGGATGGNGCATCAATGGCAGTGGAGGCCGTGCA
TGACCACAGGGGGAGCTCCGACATTGTCATTCAAGGTG

16465.1.edit

AGCGTGGNCGCGGCCGAGGTGCAGCGCGGGCTGTGCCACCTTCTGCTCTCTGCCCAACGATAAGGAGGGTNCCTGC
CCCCAGGAGAACATTAACNTCCCCAGCTCGGCCTCTGCCGG

16465.2.edit

TCGAGCGGCCCGCCCGGGCAGGTTTTTTTTGCTGAAAGTGGNTACTTTATTGGNTGGGAAAGGGAGAAGCTGTGGTC
AGCCCAAGAGGGAATACAGAGNCCCGAAAAAGGGGAGGGCAGGTGGGCTGGAACCAGACGCAGGGCCAGGCAGAAA
CTTTCTCTCCTCACTGCTCAGCCTGGTGGTGGCTGGAGCTCANAAATTGGGAGTGACACAGGACACCTTCCACAG
CCATTGCGGCGGCATTTTCATCTGGCCAGGACACTGGCTGTCCACCTGGCACTGGTCCCGACAGAAGCCCAGCTGG
GGAAAGTTAATGTTACCTGGGGGCAGGAACCCCTCCTTATCATTGNGCAGAGAGCAGAAGGTGGCACAGCCCGCGC
TGCACCTCGGCCGCGACACGCT

16466.2.edit

TCGAGCGGCCCGCCCGGGCAGGTCCACCATAAGTCCTGATACAACCACGGATGAGCTGTCAGGAGCAAGGTTGATTT
CTTTCATTGGTCCGGNCTTCTCCTTGGGGGNCACCCGCACTCGATATCCAGTGAGCTGAACATTGGGTGGCGTCCA
CTGGGCGCTCAGGCT

16467.2.edit

TCGAGCGGTTGCCCCGGGCAGGTCCACCACACCCAATTCCTTGCTGGTATCATGGCAGCCGCCACGTGCCAGGATT
ACCGGCTACATCATCAAGTATGAGAAGCCTGGGTCTCCTCCCAGAGAAGCGGTCCCTCGGCCCCGCCCTGGTGTCA
CAGAGGCTACTATTACTGGCCTGGAACCGGGAACCGAATATACAATTTATGTCATTGNCCTGAAGAATAATCANNA
ANAGCGANCCCCTGATTGGAAGGA

Fig. 15EE

06_16471.edit

AGCGTGGTCGCGGCCGAGGTCTGCTGCTTCAGCGAAGGGTTTCTGGCATAACCAATGATAAGGCTGCCAAAGACTG
TTCCAATACCAGCACCAGAACCAGCCACTCCTACTGTTGCAGCACCTGCACCAATAAATTTGGCAGCAGTATCAAT
GTCTCTGCTGATTGCACTGGTCTGAACTCCCTTTGGATTAGCTGAGACACACCATTCTGGGCCCTGATTTTCCTA
AGATAGAACTCCAACCTCTTTGCCCTCTAGCACATAGCCATCTGCTCGGTCACACTGTCCCGGCCCTGAAGCGATGC
ACGCAAGAAGCTTGCCCTGCTGGAAGTCTCCTCCAGGAGACTGCTGATTTTGGCATTCTTTTTCCTTTCATCATA
TTTCTTCTGAATTTTTTTAGATCGTTTTTTGTTTAAATCTCTTCTTCTCAGGAGTCAGCTTGGCCCCCGCCGCA
TCCACACAGTCCGTGTGCGGGGAGGTAACAAGAAATACCGTGCCCTGAGGTTGGACGTGGGGAATTTCTCCTGGGG
CTCAGAGTGGTGTACTCGTAAACAAGGATCATCGATGGTGNCTACAATGCATCTAATAACGAGCTGGGTGGGACC
CAAAGAACCTGGNGAANAATGGATCGNCTCATCGACAGGACACCGTACCCGACAGGGGNACGANTCCCACTATGC
GCTTGCCCTGGGGCCGAANAAGGAAAAGTGCCTGGGCGGCCNTCGAAAGCCCAATTNTGGAAAAATCCATCAC
ACTGGGNGGCCNGTCGAGCATGCATNTANAGGGGCCCATTCCTCCCTNANN

07_16472.edit

TCGAGCGGCCGCGCCGGGCAGGTCCCCAACCAAGGCTGCAACCTGGATGCCATCAAAGTCTTCTGCAACATGGAGAC
TGGTGAGACCTGCGTGTACCCCACTCAGCCAGTGTGGCCGAGAAGAACTGGTACATCAGCAAGAACCCCAAGGAC
AAGAGGCATGTCTGGTTCGGCGAGAGCATGACCGATGGATTCCAGTTCGAGTATGGCGGCCAGGGCTCCGACCCTG
CCGATGTGGACCTCGGCCGCGACCACGCT

08_16472.edit

AGCGTGGTCGCGGCCGAGGTCCACATCGGCAGGGTCGGAGCCCTGGCCGCCATACTCGAACTGGAATCCATCGGTC
ATGCTCTCGCCGAACCAGACATGCCTCTTGTCTTGGGGTTCTTGTCTGATGTACCAAGTTCTTCTGGGCCACACTGG
GCTGAGTGGGGTACACGCAGGTCTCACCAGTCTCCATGTTGCAGAAGACTTTGATGGCATCCAGGTTGCAGCCTTG
GTTGGGGACCTGCCCCGGGCGGCCGCTCGA

09_16473.edit

TCGAGCGGCCGCGCCGGGCAGGTCCACCACACCCAATTCCTTGCTGGTATCATGGCAGCCGCCACGTGCCAGGATTA
CCGGCTACATCATCAAGTATGAGAAGCCTGGGTCTCCTCCCAGAGAAGTGGTCCCTCGGCCCGCCCTGGTGTAC
AGAGGCTACTATTACTGGCCTGGAACCGGGAACCGAATATACAATTTATGTCATTGCCCTGAAGAATAATCAGAAG
AGCGAGCCCTGATTGGAAGGAAAAAGACAGACGAGCTTCCCCAACTGGTAACCTTCCACACCCCAATCTTCATG
GACCAGAGATCTTGGATGTTCTTCCACAGTTCAAAAGACCCCTTTCGTCACCCACCCTGGGTATGACACTGGAAA
TGGTATTAGCTTCTTGGCACTTCTGGTCAGCAACCCAGTGTGGGCAACAAATGATCTTTGAGGAACATGGNTTT
AGGCGGACCACACCGCCACAACGGCCACCCCCATAAGGCATAGGCCAAGACCATAACCGCCGAATGTAGGACAAG
AAGCTNTNTNTCANACACCATNTNATGGGCCCCATTCCAGGACACTTCTGAGTACATCATTTATGNCATCTGTGGC
ACTTGATGAAAACCTTACAGTTCAGGGTCTGGAACCTTTTACCAGGCCTNTTACAGGACTNGGCCGGACNCCTTA
AGCCNATTNCACCTGGGGCGTTCTANGGTCCCACTCGNNCACTGGNGAAAATGGCTACTGTN

11_16474.edit

AGCGTGGTCGCGGCCGAGGTCCACTAGAGGTCTGTGTGCCATTGCCAGGCAGAGTCTCTGCGTTACAACTCCTA
GGAGGGCTTGCTGTGCGGAGGGCCTGCTATGGTGTGCTGCGGTTTCATCATGGAGAGTGGGGCCAAAGGCTGCGAGG
TTGTGGTGTCTGNAACTCCNAGGACANGAGGGCTAAATTCATGAAGTTTGTGGATGGCCTGATGATCCACAAT
CGGAGACCCTGTAACTACTACCGTCTNACCNCCTGCTGTNCNCCCCNTTCTGCTNAANACATNGGGNTNNTNC
TTGNCCNTCCTTGGGTNGAANATNNAATNGCCTNCCNTTTCNTANCNCTACTNGNTCCANANTTGGCCTTTAAANA
ATCCNCCTTGCTTNNNCACTGTTCANNTNTTNTTCGTA AACCTATNANTTNNATTANATNNTNNNNNCTCAC
CCCCCTCNTCATTNANCCNATANGCTNNNAANTCCTTNANNCTCCCNCNNNTNCNCTCNTACTNANTNCTTCTN
NCCCATTACNNAGCTCTTTCNTTTAANATAATGNNGCCNNGCTCTNCATNTCTACNATNTGNNAATNCCCCNCC
CCCNANCGNNTTTTTGACCTNNNAACCTCTTTCCTCTTCCCTNCNNAATTCNANNNTTCCNCNTTCCNNCNTTT
CGGNTNNTCCCATNCTTTCCANNCTTCANTCTANCNCNCTNCAACTTATTTTCTNTCATCCCTTNTTCTTTACA
NNCCCCCTNNTCTACTCNNCNTTNCATTANATTTGAACTNCCACNNCTANTTNCCTCNCTCTACNNTTTTATTT
TNCGNTCNCTCTACNTAATANTTTAATNANTTNTCN

12_16474.edit

TCGAGCGGCCGCGCCGGGCAGGTCTGCCAAGGAGACCCTGTTATGCTGTGGGGACTGGCTGGGGCATGGCAGGCGGC
TCTGGCTTCCCACCCTTCTGTTCTGAGATGGGGGTGGTGGGCAGTATCTCATCTTTGGGTTCCACAATGCTCACGT
GGTCAGGCAGGGGCTTCTTAGGGCCAATCTTACCAGTTGGGTCCCAGGGCAGCATGATCTTACCTTGATGCCAG
CACACCCTGTCTGAGCAACAGTGGCGCACAAGCAGTGTCAACGTAGTAAGTTAACAGGGTCTCCGCTGTGGATCA
TCAGGCCATCCACAACTTCATGGATTTAGCCCTCTGTCTCGGAGTTTCCAGACACCACAACCTCGCAGCCTTT
GGCCCCACTCTCATGATGAACCGCAGCACACCATAGCAGGCCCTCCGCACAAGCAAGCCCTCCTAAGAATTTGTA
ACGCANANACTCTGCTGGCAATGGCACACAAACCTCTAGTGGACCTCGGNCGCGACCACGC

13_16475.edit

TCGAGCGGCCGCGCCGGGCAGGTCTGGTCCAGGATAGCCTGCGAGTCCTCCTACTGCTACTCCAGACTTGACATCAT
ATGAATCATACTGGGGAGAATAGTTCTGAGGACCAGTAGGGCATGATTCACAGATTCAGGGGGGCCAGGAGAACC
AGGGGACCCTGGTTGTCTGGAATACCAGGGTCACCATTTCTCCAGGAATACCAGGAGGGCCTGGATCTCCCTTG
GGGCCTTGAGGTCTTGACCATTAGGAGGGCGAGTAGGAGCAGTTGGAGGCTGTGGGCAAACTGCACAACATTCTC
CAAATGGAATTTCTGGGTTGGGGCAGTCTAATTCTTGATCCGTACATATTATGTATCGCAGAGAACGGATCCTG
AGTCACAGACACATATTTGGCATGGTTCTGGCTTCCAGACATCTCTATCCGNCATAGGACTGACCAAGATGGGAAC
ATCCTCCTTCAACAAGCTTNCTGTTGTGCCAAAAATAATAGTGGGATGAAGCAGACCGAGAAGTANCCAGCTCCCC
TTTTTGCACAAAGCNTCATCATGTCTAAATATCAGACATGAGACTTCTTTGGGCAAAAAGGAGAAAAAGAAAAAG
CAGTTCAAAGTANCCNCCATCAAGTTGGTTCCTTGCCNTTCAGCACCCGGGCCCCGTTATAAAACACCTNGGGCC
GGACCCCCCTT

14_16475.edit

AGCGTGGTCGCGGCCGAGGTGTTTTATGACGGGCCCCGGTGCTGAAGGGCAGGGAACAACCTTGATGGTGCTACTTTG
AACTGCTTTTCTTTTCTCCTTTTGCACAAAGAGTCTCATGTCTGATATTTAGACATGATGAGCTTTGTGCAAAAG
GGGAGCTGGCTACTTCTCGCTCTGCTTATCCCACTATTATTTGGCACAACAGGAAGCTGTTGAAGGAGGATGTT
CCCATCTTGGTCAGTCTATGCGGATAGAGATGTCTGGAAGCCAGAACCATGCCAAATATGTGTCTGTGACTCAGG
ATCCGTTCTCTGCGATGACATAATATGTGACGATCAAGAATTAGACTGCCCCAACCCAGAAATTCATTTGGAGAA
TGTGTGTCAGTTTGGCCACAGCCTCCAACCTGCTCCTACTCGCCCTCCTAATGGTCAAGGACCTCAAGGCCCAAGG
GAGATCCAGGCCCTCCTGGTATTCCTGGGAGAAATGGTGACCCTGGTATTCCAGGACAACCAGGGTCCCCTGGTTC
TCCTGGCCCCCTGGAATCNGGNGAATCATGCCCTACTGGTCTCAAACCTATTCTCCANATGATTATATGATGT
CAAGTCTGGGATAGCNAGTANGGANGGACTCGCAGGCTATTCTGGACCANACCTGCCGGGGGGCGTTTCGAAAGCC
CGAATCTGCANANNTNCNTTCACACTGGCGGCCGTCGAGCTGCTTTAAAAGGGCCATTCCNCCTTTAGNGNGGGGG
ANTACAATTACTNGGCGGCGTTTTANANCGCGNGNCTGGGAAAT

15_16476.edit

AGCGTGGTCGCGGCCGAGGTCCACATCGGCAGGGTCGGAGCCCTGGCCGCCATACTCGAACTGGAATCCATCGGTC
ATGCTCTCGCCGAACCAGACATGCCTCTTGTCTTGGGGTCTTGCTGATGTACCAGTTCTTCTGGGCCACACTGG
GCTGAGTGGGGTACACGCAGGTCTCACCAGTCTCCATGTTGCAGAAGACTTTGATGGCATCCAGGTTGCAGCCTTG
GTTGGGGTCAATCCAGTACTCTCACTCTTCCAGTCAGAGTGGCACATCTTGAGGTACGGCAGGTGCGGGCGGGG
TTCTTGGCGTGCCTCTGGGCTCCGGATGTTCTCGATCTGCTGGCTCAGGCTCTTGAGGGTGGTGTCCACCTCGA
GGTCACGGTCACGAACCACATTGGCATCATCAGCCCGGTAGTAGCGGCCACCATCGTGAGCCTTCTCTTGANGTGG
CTGGGGCAGGAAGTGAAGTCGAAACCAGCGCTGGGAGGACCAGGGGGACCAANAGGTCCAGGAAGGGCCCGGGGG
GACCAACAGGACCAGCATCACCAAGTGCGACCCGCGAGAACCTGCCCGGCCGNCCTCGAA

16_16476.edit

TCGAGCGNNGCCCCGGGCAGGTCTCGCGGTGCACTGGTGATGCTGGTCCTGTTGGTCCCCCGGCCCTCCTGGAC
CTCCTGGTCCCCCTGGTCTCCAGCGCTGGTTTCGACTTCAGCTTCTGCCCCAGCCACCTCAAGAGAAGGCTCA
CGATGGTGGCCGCTACTACCGGGCTGATGATGCCAATGTGGTTCGTGACCGTGACCTCGAGGTGGACACCACCTC
AAGAGCCTGAGCCAGCAGATCGAGAACATCCGGAGCCCAGAGGGCAGCCGCAAGAACCCCGCCGCACCTGCCGTG
ACCTCAAGATGTGCCACTCTGACTGGAAGAGTGGAGAGTACTGGATTGACCCCAACCAAGGCTGCAACCTGGATGC
CATCAAAGTCTTCTGCAACATGGAGACTGGTGAGACCTGCGTGTACCCCACTCAGCCAGTGTGGCCAGAAGAAC
TGGTACATCAGCAAGAACCCCAAGGACAAGAGGCATGTCTGGTTCGGCGAGAGCATGACCGATGGATTCCAGTTTCG
AGTATGGCGGCCAGGGCTCCACCTGCCGATGTGGACCTCCGGCCGCGACCACCTT

Fig. 15HH

17_16477.edit

TNGAGCGGCCGCCCCGGGCAGGNTGNNAACGCTGGTCCTGCTGGTCCTCCTGGCAAGGCTGGTGAAGATGGTCACCC
TGGAAAACCCGGACGACCTGGTGAGAGAGGAGTTGTTGGACCACAGGGTGCTCGTGGTTTTCCCTGGAACCTCCTGGA
CTTCCTGGCTTCAAAGGCATTAGGGGACACAATGGTCTGGATGGATTGAAGGGACAGCCCGGTGCTCCTGGTGTGA
AGGGTGAACCTGGTGCCCTGGTGAAAATGGAACCTCAGGTCAAACAGGAGCCCGTGGGCTTCCTGGTGAGAGAGG
ACCGTGTTGGTGCCCTGGCCCANACCTCGGCCGCGACCACGCTAAGCCCGAATTTCCAGCACACTGGNGGCCGTT
ACTANTGGATCCGAGCTCGGTACCAAGCTTGGCGTAATCATGGTCATAGCTGTTTCCTGNGTGAAATTGTTATCCG
CTCACAATTTACACANCATACGAAGCCGGAAGCATAAAGTGTAAGCCTTGGGGTGCTAATGAGTGAGCTAACT
CNCATTAAATTGCGTTGCGCTCACTGCCCCGCTTTTCCANNNGGGAACCNCTGGCNTNGCCNGCTTGCNTTAANTGA
AATCCGCCNACCCCGGGGAAAAGNCGGTTTGCNGTATTGGGGCNCTTTTCCCTTTCTCGGNTTACTTGANTTA
NTGGGCTTTGGNCGNTTCGGGTTGNGGCGANCGTTCAACNTCACNCCAAAGGNGGNAANACGGTTTTCCCANAA
TCCGGGGGNTANCCCAANGNAAAACATNNGNCNAANGGGCT

18_16477.edit

AGCGTGGTTNGCGGCCGAGGTCTGGGCCAGGGGCACCAACACGTCTCTCTCACCAGGAAGCCACGGGCTCCTGT
TTGACCTGGAGTTCCATTTTACCAGGGGCACCGAGTTACCCCTTACACACAGGAGCACCAGGCTGTCCCTTCAAT
CCATNCAGACCATTTGTGNCCCCTAATGCCTTTGAAGCCAGGAAGTCCAGGAGTTCCAGGGAAACCACCGAGCACCC
TGTGGTCCAACAACCTCTCTCTCACCAGGTCTCGGGTTTTCCAGGGTGACCATCTTACCAGCCTTGCCAGGAG
GACCAGCAGGACCAGCGTTACCAACCTGCCCCGGGCGGCCGCTCGA

21_16479.edit

TCGAGCGGCCGCCCCGGGCAGGTCCATTTTCTCCCTGACGGTCCCACTTCTCTCCAATCTTGTAGTTCACACCATTG
TCATGGCACCATCTAGATGAATCACATCTGAAATGACCACTTCCAAAGCCTAAGCACTGGCACAACAGTTTAAAGC
CTGATTGAGACATTGTTCCCACTCATCTCCAACGGCATAATGGGAACTGTGTAGGGGTCAAAGCACGAGTCATC
CGTAGGTTGGTTCAAGCCTTCTGTGACAGAGTTGCCACGGTAACAACCTCTTCCCGAACCTTATGCCTCTGCTGG
TCTTTCAGTGCCTCCACTATGATGTTGTAGGTGGCACCTCTGGTGAGGACCTCGGCCGCGACCACGCT

22_16479.edit

AGCGTGGTCGCGGCCGAGGTCTCACCAGAGGTGCCACCTACAACATCATAGTGGAGGCACTGAAAGACCAGCAGA
GGCATAAGGTTCCGGGAAGAGGTGTTACCGTGGGCAACTCTGTCAACGAAGGCTTGAACCAACCTACGGATGACTC
GTGCTTTGACCCCTACACAGTTTCCATTATGCCGTTGGAGATGAGTGGGAACGAATGTCTGAATCAGGCTTTAA
CTGTTGTGCCAGTGCTTAGGCTTTGGAAGTGGTCATTTCAAGATGTGATTCATCTAGATGGTGCCATGACAATGGT
GTGAACTACAAGATTGGAGAGAAGTGGGACCGTCAGGGAGAAAATGGACCTGCCCGGGCCGGCCGCTCGA

24_16480.edit

TCGAGCGNNCGCCCGGGCAGGTCCAGTAGTGCCTTCGGGACTGGGTTCACCCCCAGGTCTGCGGCAGTTGTCACAG
CGCCAGCCCCGCTGGCCTCCAAAGCATGTGCAGGAGCAAATGGCACCGAGATATTCCTTCTGCCACTGTTCTCCTA
CGTGGTATGTCTTCCCATCATCGTAACACGTTGCCTCATGAGGGTCACACTTGAATTCTCCTTTCCGTTCCCAAG
ACATGTGCAGCTCATTTGGCTGGCTCTATAGTTTGGGGAAAGTTTGTGAAACTGTGCCACTGACCTTTACTTCCT
CCTTCTCTACTGGAGCTTTTCGTACCTTCCACTTCTGCTGTTGGTAAAATGGTGGATCTTCTATCAATTTATTGAC
AGTACCCACTTCTCCCAAACATCCAGGGAAATAGTGATTTAGAGCGATTAGGAGAACCAAATTATGGGGCAGAAA
TAAGGGGCTTTTCCACAGGTTTTCCTTTGGAGGAAGATTTAGTGCTGACTTTAAAAGAATACTCAACAGTGTCTT
CATCCCCATAGCAAAGAAGAAACNGTAAATGATGGAANGCTTCTGGAGATGCCNNCATTTAAGGGACNCCCAGAA
CTTACCATCTACAGGACCTACTTCAGTTTACANNAAGNCACATANTCTGACTCANAAAGGACCCAAGTAGCNCCA
TGGNCAGCACTTTNAGCCTTTCCCTGGGGAAAANNTTACNTTCTTAAANCCTNGGCCNNGACCCCCCTTAAGNCCA
AATTNTGGAAAANTTCCNTNCCNCTGGGGGGCNGTTCNACATGCNTTNAAGGGCCCAATTNCCCCNT

25_16481.edit

TCGAGCGGCCCGGCCCGGGCAGGTGTGCGAGTCCAGCACGGGAGGCGTGGTCTTGTAGTTGTTCTCCGGCTGCCATT
GCTCTCCCACTCCACGGCGATGTGCTGGGATAGAAGCCTTTGACCAGGCAGGTGAGGCTGACCTGGTCTTGGTC
ATCTCCTCCCGGGATGGGGCAGGGTGTACACCTGTGGTTCTCGGGGCTGCCCTTTGGCTTTGGAGATGGTTTTCT
CGATGGGGGCTGGGAGGGCTTTGTTGGAGACCTTGCACTTGTACTCCTTGCCATTAGCCAGTCCTGGTGCAGGAC
GGTGAGGACGCTGACCACACGGTACGTGCTGTTGTACTGCTCCTCCCGCGGCTTTGTCTTGGCATTATGCACCTCC
ACGCCGTCCACGTACCAAGTTGAACCTGACCTCAGGGTCTTGTGGCTCAGTCCACCACCACGCATGTAACCTCAG
ACCTCGGCCGCGACCACTGCT

26_16481.edit

AGCGTGGTTCGCGGCCGAGGTCTGAGGTTACATGCGTGGTGGTGGACGTGAGCCACGAAGACCCTGAGGTCAAGTTC
AACTGGTACGTGGACGGCGTGGAGGTGCATAATGCCAAGACAAAGCCGCGGGAGGAGCAGTACAACAGCACGTACC
GTGTGGTCAGCGTCTCACCGTCTGCACCAGGACTGGCTGAATGGCAAGGAGTACAAGTGCAAGGTCTCCAACAA
AGCCCTCCAGCCCCATCGAGAAAACCATCTCCAAAGCCAAAGGGCAAGCCCCGAGAACCACAGGTGTACACCT
GCCCCCATCCCGGGAGGAGATGACCAAGAACCAGGTGAGCCTGACCTGCCTGGTCAAAGGCTTCTATCCAGCGAC
ATCGCCGTGGAGTGGGAGAGCAATGGGCAGCCGAGAACAACTACAAGACCACGCCTCCCGTGTGGACTCCGACA
CCTGCCCGGGCGGCCGCTCGA

27_16482.edit

TCGAGCGGCCCGGCCCGGGCAGGTTGAATGGCTCCTCGCTGACCACCCCGGTGCTGGTGGTGGGTACAGAGCTCCGAT
GGGTGAAACCATTGACATAGAGACTGTCCCTGTCCAGGGTGTAGGGGCCAGCTCAGTGATGCCGTGGGTGAGCTG
GCTCAGCTTCCAGTACAGCCGCTCTCTGTCCAGTCCAGGGCTTTTGGGGTCAGGACGATGGGTGCAGACAGCATCC
ACTCTGGTGGCTGCCCCATCCTTCTCAGGCCTGAGCAAGGTGAGTCTGCAACCAGAGTACAGAGAGCTGACACTGG
TGTTCTTGAACAAGGGCATAAGCAGACCCTGAAGGACACCTCGGCCGCGACCACTGCT

28_16482.edit

AGCGTGGTCGCGGCCGAGGTGTCCTTCAGGGTCTGCTTATGCCCTTGTTCAAGAACACCAGTGTGAGCTCTCTGTA
CTCTGGTTGCAGACTGACCTTGCTCAGGCCTGAGAAGGATGGGGCAGCCACCAGAGTGGATGCTGTCTGCACCCAT
CGTCCTGACCCCAAAGCCCTGGACTGGACAGAGAGCGGCTGTACTGGAAGCTGAGCCAGCTGACCCACGGCATCA
CTGAGCTGGGCCCCCTACACCCTGGACAGGGACAGTCTCTATGTCAATGGTTTCACCCATCGGAGCTCTGTACCCAC
CACCAGCACCGGGGTGGTCAGCGAGGAGCCATTCAACCTGCCCGGGCGGCCGCTCGA

29_16483.edit

AGCGTGGTCGCGGCCGAGGTGCTGTGAGAGTGGCACTGGTAGAAGTTCCAGGAACCCTGAACTGTAAGGGTTCTTC
ATCAGTGCCAACAGGATGACATGAAATGATGTACTCAGAAGTGTCTGGAATGGGGCCCATGAGATGGTTGTCTGA
GAGAGAGCTTCTTGCTCTACATTCGGCGGGTATGGTCTTGGCCTATGCCTTATGGGGGTGGCCGTTGTGGGCGGTG
TGGTCCGCCTAAAACCATGTTCTCAAAGATCATTTGTTGCCAACACTGGGTTGCTGACCAGAAGTGCCAGGAAG
CTGAATACCATTTCCAGTGTGATACCCAGGGTGGGTGACGAAAGGGGTCTTTTGAAGTGTGGAAGGAACATCCAAG
ATCTCTGGTCCATGAAGATTGGGGTGTGGAAGGGTTACCAGTTGGGGAAGCTCGTCTGTCTTTTCTTCCAATCA
GGGGCTCGCTCTTCTGATTATTCTTCAGGGCAATGACATAAATTGTATATTCCGTCCCGGTTCCAGGCCAGTAATA
GTAGCCTCTGTGACACCAGGGCGGGGCCGAGGGACCCTTCTNTTGAAGAGACCAGCTTCTCATACTTGATGATGA
GNCCGGTAATCCTGGCACGTGGNGGTTGCATGATNCCACCAAGGAAATNGGNGGGGGNGGACCTGCCCGGCGGCCG
TTCNAAAGCCCAATTCCACACACTTGGNGGCCGTACTATGGATCCCACTCNGTCCAAGTTGGNGGAATATGGCATA
ACTTTT

31_16484.edit

TCGAGCGGCCGCCCCGGGCAGGTGCTTGACCTTTTTAGCAAGTGGGAAGGTGTAATCCGTCTCCACAGACAAGGCCA
GGACTCGTTTGTACCCGTTGATGATAGAATGGGGTACTGATGCAACAGTTGGGTAGCCAATCTGCAGACAGACACT
GGCAACATTGCGGACACCCTCCAGGAAGCGAGAATGCAGAGTTTCTCTGTGATATCAAGCACTTCAGGGTTGTAG
ATGCTGCCATTGTGGAACACCTGCTGGATGACCAGCCCAAAGGAGAAGGGGGAGATGTTGAGCATGTTGAGCAGCG
TGGCTTCGCTGGCTCCCACTTTGTCTCCAGTCTTGATCAGACCTCGGCCGCGACCACGT

37_16487.edit

AGCGTGGTCGCGGCCGAGGTCTGTCCTACAGTCTCAGGACTCTACTCCCTCAGCAGCGTGGTGACCGTGCCCTCC
AGCAACTTCGGCACCCAGACCTACACCTGCAACGTAGATCACAAGCCAGCAACACCAAGGTGGACAAGAGAGTTG
AGCCCAAATCTTGACAAAACCTCACACATGCCACCGTGCCAGCACCTGAACTCCTGGGGGGACCGTCAGTCTT
CCTCTTCCCCCGCATCCCCCTTCAAACCTGCCCGGGCGGCCGCTCG

38_16487.edit

CGAGCGGCCGCGCCGGGCAGGTTTGGAAAGGGGGATGCGGGGGAAGAGGAAGACTGACGGTCCCCCAGGAGTTCAGG
TGCTGGGCACGGTGGGCATGTGTGAGTTTTGTCAAGATTTGGGCTCAACTCTCTTGTCCACCTTGGTGTGCTG
GGCTTGTGATCTACGTTGCAGGTGTAGGTCTGGGTGCCGAAGTTGCTGGAGGGCACGGTACCACGCTGCTGAGGG
AGTAGAGTCCTGAGGACTGTAGGACAGACCTCGGCCGCGACCACGT

39_16488.edit

NGGNNGGTCCGGNCNGNCAGGACCACTCNTCTTCGAAATA

41_16489.edit

AGCGTGGTCGCGGCCGAGGTCTCACTTGCCTCCTGCAAAGCACCGATAGCTGCGCTCTGGAAGCGCAGATCTGTT
TTAAAGTCCTGAGCAATTTCTCGCACCAGACGCTGGAAGGGAAGTTTGCGAATCAGAAGTTCAGTGGACTTCTGAT
AACGTCTAATTTACGGAGCGCCACAGTACCAGGACCTGCCCCGGGCGGCCGCTCGA

42_16489.edit

TCGAGCGGCCGCGCCGGGCAGGTCTGGTACTGNGGCGCTCCGTGAAATTAGACGTTATCAGAAGTCCACTGAACTT
CTGATTCGCAAACCTTCCCTTCCAGCGTCTGGTGCGAGAAATTGCTCAGGACTTTAAACAGATCTGCGCTTCCAGA
GCGCAGCTATCGGTGCTTTGCAGGAGGCAAGTGAGGACCTCGGCCGCGACCACGT

45_16491.edit

TCGAGCGGCCGCGCCGGGCAGGTCCACATCGGCAGGGTCGGAGCCCTGGCCGCCATACTCGAACTGGAATCCATCGG
TCATGCTCTCGCCGAACCAGACATGCCTCTTGTCTTGGGGTTCTTGCTGATGTACCAGTTCTTCTGGGCCACACT
GGGCTGAGTGGGGTACACGCAGGTCTCACCAGTCTCCATGTTGCAGAAGACTTTGATGGCATCCAGGTTGCAGCCT
TGGTTGGGGTCAATCCAGTACTCTCCACTCTTCCAGTCAGAGTGGCACATCTTGAGGTACGGCAGGTGCGGGCGG
GGTTCTTGACCTCGGCCGCGACCACGT

46_16491.edit

GTGGGNTTGAACCCNTTTNANCTCCGCTTGGTACCGAGCTCGGATCCACTAGTAACGGCCGCCAGTGTGCTGGAAT
TCGGCTTAGCGTGGTCGCGGCCGAGGTCAAGAACCCGCCCCGACCTGCCGTGACCTCAAGATGTGCCACTCTGAC
TGGAAGAGTGGAGAGTACTGGATTGACCCCAACCAAGGCTGCAACCTGGATGCCATCAAAGTCTTCTGCAACATGG
AGACTGGTGAGACCTGCGTGTACCCCACTCAGCCCACTGTGGCCCAAGAAGTGGTACATCAGCAAGAACCCCAA
GGACAAGAGGGCATGTCTGGTTCGGCGAGAGCATGACCGATGGATTCCAGTTCGAGTATGGCGGCCAGGGCTCCGAC
CCTGCCGATGTGGACCTGCCCCGGCGGCCGCTCGA

47_16492.edit

AGCGTGGTCGCGGCCGAGGTCTGGGATGCTCCTGCTGTACAGTGAGATATTACAGGATCACTTACGGAGAAACAG
GAGGAAATAGCCCTGTCCAGGAGTTCAGTGTGCTGGGAGCAAGTCTACAGCTACCATCAGCGGCCTTAAACCTGG
AGTTGATTATACCATCACTGTGTATGCTGTCACTGGCCGTGGAGACAGCCCCGCAAGCAGCAAGCCAATTTCCATT
AATTACCGAACAGAAATTGACAAACCATCCAGATGCAAGTGACCGATGTTTCAAGACAACAGCATTAGTGTCAAGT
GGCTGCCTTCAAGTTCCTCTGTTACTGGTTACAGAGTAACCACCACTCCCAAAAATGGACCAGGACCAACAAAAAC
TAAACTGCAGGTCCAGATCAAACAGAAATGACTATTGAAGGCTTGACGCCACAGTGGAGTATGTGGTTAAGTGT
CTATGCTCAGAATCCAAGCGGAGAGAAGTCAGCCTCTGGTTCAGACTGNAAGTAACCAACATTGATCGCCTAAAGG
ACTGGCATTCACTGATGNGGATGCCGATTCCATCAAAATTGNTTGGGAAAACCCACAGGGGCAAGTTTNCANGTCN
AGGNGGACCTACTCGAGCCCTGAGGATGGAATCCTTGACTNTTCCTTNNCCTGATGGGGAAAAAAACCTTNAAAA
CTTGAAGGACCTGCCCCGGCGGCCGTNCAAAACCCAATTCCACCCCTTGGGGGCGTTCTATGGGNCCCACTCGGA
CCAAACTTGGGGTAAN

48_16492.edit

TCGAGCGGCCCGCCGGGCAGGTCTTGCAGCTCTGCAGTGTCTTCTTACCATCAGGTGCAGGGAATAGCTCATGG
ATTCCATCCTCAGGGCTCGAGTAGGTCAACCTGTACCTGGAACTTGCCCTGTGGGCTTTCCCAAGCAATTTTGA
TGGAATCGGCATCCACATCAGTGAATGCCAGTCTTTAGGGCGATCAATGTTGGTTACTGCAGTCTGAACCAGAGG
CTGACTCTCTCCGCTTGGATTCTGAGCATAGACACTAACCACATACTCCACTGTGGGCTGCAAGCCTTCAATAGTC
ATTTCTGTTTGATCTGGACCTGCAGTTTTAGTTTTTGTGGTCTGGTCCATTTTTGGGAGTGGTGGTTACTCTGT
AACCAGTAACAGGGGAACCTTGAAGGCAGCCACTTGACACTAATGCTGTTGTCTGAACATCGGTCACTTGCATCTG
GGATGGTTTGTCAATTTCTGTTTCGGTAATTAATGGAAATTGGCTTGCTGCTTGCGGGGCTTGTCTCCACGGCCAGT
GACAGCATACACAGTGATGGTATAATCAACTCCAGGTTTAAAGCCGCTGATGGTAGCTGAAACTTTGCTCCAGGCAC
AAGTGAACCTCTGACAGGGCTATTTCTNCTGTTCTCCGTAAGTGATCCTGTAATATCTCACTGGGACAGCAGGAN
GCATTCCAAAACCTCGGGCGNGACCCCTAAGCCGAATTNTGCAATATNCATCACACTGGCGGGCGCTCGANCATT
CATTAAAAGGCCCAATCNCCTATAGGGAGTNTANTACAATTNG

Fig. 15MM

49_16493.edit

TCGAGCGGCCGCCCCGGGCAGGTCACTTTTGGTTTTTGGTCATGTTGCGTTGGTCAAAGATAAAAACTAAGTTTGAG
AGATGAATGCAAAGGAAAAAATATTTTCCAAAGTCCATGTGAAATTGTCTCCATTTTTTTGGCTTTTGAGGGGG
TTCAGTTTGGGTTGCTTGTCTGTTTCCGGGTTGGGGGAAAGTTGGTTGGGTGGGAGGGAGCCAGGTTGGGATGGA
GGGAGTTTACAGGAAGCAGACAGGGCCAACGTCG

55_16496.edit

AGCGTGGTCGCGGCCGAGGTCCTCACCAGAGGTGCCACCTACAACATCATAGTGGAGGCACTGAAAGACCAGCAGA
GGCATAAGGTTTCGGGAAGAGGTTGTTACCGTGGGCAACTCTGTCAACGAAGGCTTGAACCAACCTACGGATGACTC
GTGCTTTGACCCCTACACAGTTTCCCATTATGCCGTTGGAGATGAGTGGGAACGAATGTCTGAATCAGGCTTTAA
CTGTTGTGCCAGTGCTTAGGCTTTGGAAGTGGTCATTTAGATGTGATTCATCTAGATGGTGCCATGACAATGGTG
TGAACATAAGATTGGAGAGAAGTGGGACCGTCAGGGAGAAAATGGACCTGCCCGGGCGGCCGCTCGA

56_16496.edit

TCGAGCGGCCGCCCCGGGCAGGTCCATTTTCTCCCTGACGGTCCCACTTCTCTCCAATCTTGTAGTTCACACCATTG
TCATGGCACCATCTAGATGAATCACATCTGAAATGAACCACTTCCAAAGCCTAAGCACTGGCACAACAGTTTAAAGC
CTGATTCAGACATTCGTTCCCACTCATCTCCAACGGCATAATGGGAACTGTGTAGGGGTCAAAGCACGAGTCATC
CGTAGGTTGGTTCAAGCCTTCGTTGACAGAGTTGCCACGGTAACAACCTCTTCCCGAACCTTATGCCTCTGCTGG
TCTTTCAAGTGCCTCCACTATGATGTTGTAGGTGGCACCTCTGGTGAGGACCTCGGCCGCGACCACGCT

59_16498.edit

TCGAGCGGCCGCCCCGGGCAGGTCCACCATAAGTCCTGATACAACCACGGATGAGCTGTGAGGAGCAAGGTTGATTT
CTTTTATTGGTCCGGTCTTCTCCTTGGGGGTACCCGCACTCGATATCCAGTGAGCTGAACATTGGGTGGTGTCCA
CTGGGCGCTCAGGCTTGTGGGTGTGACCTGAGTGAACCTCAGGTGAGTTGGTGCAGGAATAGTGGTTACTGCAGTC
TGAACCAGAGGCTGACTCTCTCCGCTTGGATTCTGAGCATAGACACTAACCACATACTCCACTGTGGGCTGCAAGC
CTTCAATAGTCATTTCTGTTTGATCTGGACCTGCAGTTTTAGTTTTTGTGGTCTGGTCCATTTTTGGGAGTGGT
GGTTACTCTGTAACCAGTAACAGGGGAACCTGAAGGCAGCCACTTGACACTAATGCTGTTGTCTGAACATCGGTC
ACTTGATCTGGGATGGTTTGNCAATTTCTGTTCCGTAATTAATGGAAATTGGCTTGCTGCTTGCGGGGCTGTCTC
CACGGCCAGTGACAGCATACAGNGATGGNATNATCAACTCCAAGTTTAAAGCCCTGATGGTAACTTTAAACTTG
CTCCAGCCAGNGAATTCGGACAGGGTATTTCTTCTGGTTTTCCGAAAGNGANCCTGGAATNNTCTCCTTGGAN
CAGAAGGANCTCCAAAACCTTGGGCCGGAACCCCTT

Fig. 15NN

60_16473.edit

AGCGTGGTCGCGGCCGAGGTCCTGTCAGAGTGGCACTGGTAGAAGTTCCAGGAACCCTGAACTGTAAGGGTTCTTC
ATCAGTGCCAACAGGATGACATGAAATGATGTACTCAGAAGTGTCTGGAATGGGGCCCATGAGATGGTTGTCTGA
GAGAGAGCTTCTTGCTACATTCGGCGGGTATGGTCTTGGCCTATGCCTTATGGGGGTGGCCGTTGTGGGCGGTG
TGGTCCGCCTAAAACCATGTTCTCAAAGATCATTTGTTGCCAACACTGGGTTGCTGACCAGAAGTGCCAGGAAG
CTGAATACCATTTCCAGTGTACATCCAGGGTGGGTGACGAAAGGGGTCTTTTGAAGTGTGGAAGGAACATCCAAG
ATCTCTGGTCCATGAAGATTGGGGTGTGGAAGGGTTACCAGTTGGGGAAGCTCGTCTGTCTTTTTCTTCCAATCA
GGGGCTCGCTCTTCTGATTATTCTTCAGGGCAATGACATAAATTGTATATTCGGTTCCTGGTTCAGGCCAGTAAT
AGTAGCCTCTTGTGACACCAGGCGGGGCCANGGACCACTTCTCTGGGANGAGACCCAGCTTCTCATACTTGATGA
TGTAACCCGGTAATCCTGCACGTGGCGGCTGNCATGATACCANCAAGGAATTGGGTGNGGNGGACCTGCCCGGCGG
CCCTCNA

60_16498.edit

AGCGTGGTCGCGGCCGAGGTCCTGGGATGCTCCTGCTGTACAGTGAGATATTACAGGATCACTTACGGAGAAACAG
GAGGAAATAGCCCTGTCCAGGAGTTCACTGTGCCTGGGAGCAAGTCTACAGCTACCATCAGCGGCCTTAAACCTGG
AGTTGATTATACCATCACTGTGTATGCTGTCACTGGCCGTGGAGACAGCCCCGCAAGCAGCAAGCCAATTTCCATT
AATTACCGAACAGAAATTGACAAACCATCCAGATGCAAGTGACCGATGTTTACAGGACAACAGCATTAGTGTCAAGT
GGCTGCCTTCAAGTTCCCTGTACTGGTTACAGAGTAACCACCACTCCCAAAAATGGACCAGGACCAACAAAAAC
TAAACTGCAGGTCCAGATCAAACAGAAATGACTATTGAAGGCTTGACAGCCACAGTGGAGTATGTGGTTAGTGTCT
TATGCTCAGAATCCAAGCGGAGAGAGTCAAGCTCTGGTTCAGACTGCAGTAACCACTATTCTGCACCAACTGACC
TGAAGTTCACTCAGGTACACCCACAAGCCTGAGCCGCCAGTGGACACCACCAATGTTCACTCACTGGATATCGA
GTGCGGGTGACCCCAAGGAGAAGACCCGGACCCATGAAAGAAATCAACCTTGCTCCTGACAGCTCATCCGNGGGT
GTATCAGGACTTATGGGGGACTGCCCGGCGNGCCGNTCGAAANCGAATTNTGAAATTTCTTCNCACTGGGNGGC
GNTTCGAGCTTNTTANANGGCCAATTCNCCTNTAGNGGGTCTGN

61_16499.edit

AGCGTGGTCGCGGCCGAGGTCNAGG

62_16483.edit

TCGAGCGGCCGCGCCGGGCAGGTCCACCACACCCAATTCCTTGCTGGTATCATGGCAGCCGCCACGTGCCAGGATTA
CCGGCTACATCATCAAGTATGAGAAGCCTGGGTCTCCTCCCAGAGAAGTGGTCCCTCGGCCCGCCCTGGTGTAC
AGAGGCTACTATTACTGGCCTGGAACCGGGAACCGAATATACAATTTATGTCATTGCCCTGAAGAATAATCAGAAG
AGCGAGCCCTGATTGGAAGGAAAAAGACAGACGAGCTTCCCCAACTGGTAACCTTCCACACCCCAATCTTCATG
GACCAGAGATCTTGATGTTCTTCCACAGTTCAAAAGACCCCTTTCGTCACCCACCCTGGGTATGACACTGGAAA
TGGTATTCACTTCTTGGCACTTCTGGTCAGCAACCCAGTGTGGGCAACAAATGATCTTTGAGGAACATGGTTTT
AGGCGGACCACACCGCCACAACGGGCACCCCATAGGNAAGGCAAGACCATACCCCGCCGAATGTAGGACAA
GAAGCTCTNTCTCAACAACCATCTCATGGGCCCCATTCCAGGACACTTCTGAGTACATCATTTTCATGTCATCTGG
TGGGCACTTGATGAANAACCTTACAGTTACGGGTCTGGAACCTTCTACCAGNGCCACTTCTGACAGGANCTTGG
GCGNGACCACTT

63_16500.edit

AGCGTGGTCGCGGCCGAGGTCCATTTTCTCCCTGACGGTCCCACTTCTCTCCAATCTTGTAAGTTCACACCATTTGTC
ATGGCACCATCTAGATGAATCACATCTGAAATGACCACTTCCAAAGCCTAAGCACTGGCACAACAGTTTAAAGCCT
GATTCAGACATTCGTTCCCACTCATCTCCAACGGCATAATGGGAACTGTGTAGGGGTCAAAGCACGAGTCATCCG
TAGGTTGGTTCAAGCCTTCGTTGACAGAGTTGCCACGGTAACAACCTCTTCCCGAACCTTATGCCTCTGCTGGTC
TTTCAGTGCCTCCACTATGATGTTGTAGGTGGCACCTCTGGTGAGGACCTGCCCGGGCGGCCCGCTCGA

64_16493.edit

AGCGTGGTCGCGGCCGAGGTGTGCCCCAGACCAGGAATTCGGCTTCGACGTTGGCCCTGTCTGCTTCCTGTAACT
CCCTCCATCCCAACCTGGCTCCCTCCCACCCAACCAACTTTCCCCCAACCCGGAACAGACAAGCAACCCAACT
GAACCCCTCAAAGCCAAAAAATGGGAGACAATTTACATGGACTTTGGAAAATATTTTTTCTTTGCATTCA
TCTCTCAAACCTAGTTTTTATCTTTGACCAACCGAACATGACCAAAAACCAAAAGTGACCTGCCCGGGCGGCCGCT
CGA

64_16500.edit

TCGAGCGGCCGCCCCGGGCAGGTCCTCACCAGAGGTGCCACCTACAACATCATAGTGGAGGCACTGAAAGACCAGCA
GAGGCATAAGGTTGCGGAAGAGGTTGTTACCGTGGGCAACTCTGTCAACGAAGGCTTGAACCAACCTACGGATGAC
TCGTGCTTTGACCCCTACACAGTTTCCATTATGCCGTTGGAGATGAGTGGGAACGAATGTCTGAATCAGGCTTTA
AACTGTTGTGCCAGTGCTTAGGCTTTGGAAGTGGTCATTTAGATGTGATTCATCTAGATGGTGCCATGACAATGG
TGTGAACTACAAGATTGGAGAGAAGTGGGACCGTCAGGGAGAAAATGGACCTCGGCCGCGACCACGCT

16501.edit

TCGAGCGGCCGCGCCGGGCAGGTACCGGGGTGGTCAGCGAGGAGCCATTCACTGAACCTTCACCATCAACAACCTG
CGGTATGAGGAGAACATGCAGCACCCCTGGCTCCAGGAAGTTCAACACCACGGAGAGGGTCTTCAGGGCCTGCTCA
GGTCCCTGTTCAAGAGCACCACTGTTGGCCCTCTGTACTCTGGCTGCAGACTGACTTTGCTCAGACCTGAGAAACA
TGGGGCAGCCACTGGAGTGGACGCCATCTGCACCCTCCGCCTTGATCCCACTGGTNCTGGACTGGACANANAGCGG
CTATACTTGGGAGCTGANCCNAACCTTTGGCGGNGACNCCNCTT

16501.2.edit

GAGGACTGGCTCAGCTCCCAGTATAGCCGCTCTCTGTCCAGTCCAGGACCAGTGGGATCAAGGCGGAGGGTGCAGA
TGGCGTCCACTCCAGTGGCTGCCCATGTTTCTCAAGTCTGAGCAAAGNCAGTCTGCAGCCAGAGTACAGAGGGCC
AACACTGGTGCTCTTGAACAGGGACCTGAGCAGGCCCTGAAGGACCCTCTCCGTGGTGTGAACTTCCTGGAGCCA
GGGTGCTGCATGTTCTCCTCATACCGCAGGTTGTTGATGGTGAAGTTCAGTGTGAATGGCTCCTCGCTGACCACCC

16502.1.edit

AGCGTGGTCGCGGCCGAGGTCCACCACACCCAATTCCTTGCTGGTATCATGGCAGCCGCCACGTGCCAGGATTACC
GGCTACATCATCAAGTATGAGAAGCCTGGGTCTCCTCCCAGAGAAGTGGTCCCTCGGCCCCGCCCTGGTGTACAG
AGGCTACTATTACTGGCCTGGAACCGGGAACCGAATATACAATTTATGTCATTGCCCTGAAGAATAATCAGAAGAG
CGAGCCCCCTGATTGGAAGGAAAAAGACAGACGAGCTTCCCCAACTGGTAACCCTTCCACACCCCAATCTTCATGGA
CCANANANCTTGGATNGTCCTTTACNGGTTNAAAAAACCTTTTCGCCCCCCCACCTTGGGGATTAACCTTGGGA
AANGGGGATTTNACCNTTCC

16502.2.edit

TCGAGCGGCCGCGCCGGGCAGGTCTGTGAGAGTGGCACTGGTAGAAGTTCAGGAACCCTGAACTGTAAGGGTTCT
TCATCAGTGCCAACAGGATGACATGAAATGATGTACTCAGAAGTGTCTGGAATGGGGCCCATGAGATGGTTGTCT
GAGAGAGAGCTTCTTGCTCTACATTCGGCGGGTATGGTCTTGGCCTATGCCTTATGGGGGTGGCCGTTGTGGGCGG
TGTGGTCCGCCTAAAACCATGTTCTCAAAGATCATTTGTTGCCAACACTGGGTTGCTGACCAGAAGTGCCAGGA
AGCTGAATAACCATTTCCAGTGTATACCCAGGGNGGGTGACCAAAGGGGGTCNTTTNGACCTGGNGAAAGGAACCA
TCCAAAANCTCTGNCCCATG

Fig. 15QQ

16503.1.edit

AGCGTGGNCGCGGCCGAGGTCTGAGGATGTAACTCTTCCCAGGGGAAGGCTGAAGTGCTGACCATGGTGCTACTG
GGTCCTTCTGAGTCAGATATGTGACTGATGNGAACTGAAGTAGGTACTGTAGATGGTGAAGTCTGGGTGTCCCTAA
ATGCTGCATCTCCAGAGCCTTCCATCATTACCGTTTCTTCTTTTGCTATGGGATGAGACACTGTTGAGTATTCTCT
AAAGTCACCACTGAAATCTTCTCCAAAGGAAAACCTGTGGAAAAGCCCCTTATTTCTGCCCCATAATTTGGTTCT
CCTAATCNCTCTGAAATCACTATTTCCCTGGAANGTTTGGGAAAAANNGGGCNACCTGNCANTGGAAANTGGATAN
AAAGATCCCACCATTTTACCCAACNAGCAGAAAGTGGGAANGGTACCGAAAAGCTCCAAGTAANAAAAAGGAGGGA
AGTAAAGGTCAAGTGGGCACCAGTTTCAAACAAAACCTTTCCCAAACTATANAACCCA

16503.2.edit

AAGCGGCCGCCCCGGGCAGGNNCAGNAGTGCCTTCGGGACTGGGNTCACCCCCAGGTCTGCGGCAGTTGTACAGCG
CCAGCCCCGCTGGCCTCCAAAGCATGTGCAGGAGCAAATGGCACCGAGATATTCCTTCTGCCACTGTTCTCCTACG
TGGTATGTCTTCCCATCATCGTAACACGTTGCCTCATGAGGGTCACACTTGAATTCTCCTTTTCCGTTCCCAAGAC
ATGTGCAGCTCATTTGGCTGGCTCTATAGTTTGGGAAAAGTTTGTGAACTGTGCCACTGACCTTTACTTCCTCC
TTCTCTACTGGAGCTTTCCGTACCTTCCACTTCTGCTGNTGGNAAAAAGGGNGGAACNTCTTATCAATTTATTGG
ACAGTANCCCNCTTTCTNCCCAAACATNCAAGGGAAAATATTGATTNCNAGAGCGGATTAAGGAACAACCCNAAT
TATGGGGGCCAGAAATAAAGGGGGCTTTTCCACAGGTNTTTTCT

16504.1.edit

TCGAGCGGCCGCCCCGGGCAGGTCTGCAGGCTATTGTAAGTGTTCTGAGCACATATGAGATAACCTGGGCCAAGCTA
TGATGTTTCGATACGTTAGGTGTATTAAATGCACTTTTGAAGTCCATCTCAGTGGATGACAGCCTTCTCACTGACAG
CAGAGATCTTCTCACTGTGCCAGTGGGCAGGAGAAAGAGCATGCTGCGACTGGACCTCGGCCGCGACCACGCT

16504.2.edit

AGCGTGGTCGCGGCCGAGGTCCAGTCGCAGCATGCTCTTTCTCCTGCCCACTGGCACAGTGAGGAAGATCTCTGCT
GTCAGTGAGAAGGCTGTCATCCACTGAGATGGCAGTCAAAGTGCATTTAATACACCTAACGTATCGAACATCATA
GCTTGGCCAGGTTATCTCATATGTGCTCAGAACACTTACAATAGCCTGCAGACCTGCCCGGGCGGCCGCTCGA

16505.1.edit

CGAGCGGCCGCCCCGGGCAGGTCCAGACTCCAATCCAGAGAACCACCAAGCCAGATGTCAGAAGCTACACCATCACA
GGTTTACAACCAGGCACTGACTACAAGATCTACCTGTACACCTTGAATGACAAATGCTCGGAGCTCCCCTGTGGTCA
TCGACGCCTCCACTGCCATTGATGCACCATCCAACCTGCGTTTCCTGGCCACCACACCCAATTCCTTGCTGGTATC
ATGGCAGCCGCCACGTGCCAGGATTACCGGCTACATCATCAAGTATGAGAAGCCTGGGTCTCCTCCCAGAGAAGTG
GTCCCTCGGCCCGCCCTGGTGNCACAGAAGCTACTATTACTGGCCTGGAACCGGAACCGAATATACAATTTATG
TCATTGCCCTGAAGAATAATCANAAGAGCGAGCCCTGATTGGAAGG

16505.2.edit

AGCGTGGTCGCGGCCGAGGTCCCTGTCAGAGTGGCACTGGTAGAAGTTCCAGGAACCCTGAACTGTAAGGGTTCTTC
ATCAGTGCCAACAGGATGACATGAAATGATGTACTCAGAAGTGTCTGGAATGGGGCCCATGAGATGGTTGTCTGA
GAGAGAGCTTCTTGCTCTGCTTTTTCTTCCAATCAGGGGCTCGCTCTTCTGATTATTCTTCAGGGCAATGACAT
AAATTGTATATTCGGTTCCTGGTTCAGGCCAGTAATAGTAGCCTCTGTGACACCAGGGCGGGGCCGAGGGACCAC
TTCTCTGGGAGGAGACCCAGGCTTCTCATACTTGATGATGTANCCGGTAATCCTGGCACCGTGGCGGCTGCCATGA
TACCAGCAAGGAATTGGGTGTGGTGGCCAAGAAACGCAGGTTGGATGGTGCATCAATGGCAGTGGAGGCGTTCGATN
ACCACAGGGGAGCTCCGANCATTGTCATTCAAGGTGGACAGGTAGAATCTTGTAATCAGGTGCCTGGTTTGTAAC
CTG

16506.1.edit

TCGAGCGGCCGCCCCGGGCAGGTTTCGTGACCGTGACCTCGAGGTGGACACCACCCTCAAGAGCCTGAGCCAGCAGA
TCGAGAACATCCGGAGCCAGAGGGCAGCCGCAAGAACCCCGCCGACCTGCCGTGACCTCAAGATGTGCCACTC
TGACTGGAAGAGTGGAGAGTACTGGATTGACCCCAACCAAGGCTGCAACCTGGATGCCATCAAAGTCTTCTGCAAC
ATGGAGACTGGTGAGACCTGCGTGTACCCCACTCAGCCAGTGTGGCCAGAAAGAACTGGTACATCAGCAAGAACC
CCAAGGACAAGAAGCATGTCTGGTTCGGCGAAAGCATGACCGATGGATTCCAGTTCGAGTATGGCGGCCAGGGCTC
CGACCCTGCCGATGTGGACCTCGGCCGCGACCACGCTAAGCCCGAATTCCAGCACACTGGCGGCCGTTACTAGTGG
GATCCGAGCTTCGGTACCAAGCTTGGCGTAATCATGGGNCATAGCTGTTTCCTGNGTGAAATGGTATTCCGCTTC
ACAATTTCCAC

16506.2.edit

AGCGTGGTCGCGGCCGAGGTCCACATCGGCAGGGTCCGAGCCCTGGCCGCCATACTCGAACTGGAATCCATCGGTC
ATGCTCTCGCCGAACCAGACATGCCTCTTGCTCTTGGGGTCTTGCTGATGTACCAGTTCTTCTGGGCCACACTGG
GCTGAGTGGGGTACACGCAGGTCTCACCAGTCTCCATGTTGCAGAAGACTTTGATGGCATCCAGGTTGCAGCCTTG
GTTGGGGTCAATCCAGTACTCTCACTCTTCCAGTCAGAGTGGCACATCTTGAGGTACGGCAGGTGCGGGCGGGG
TTCTTGCGGCTGCCCTCTGGGCTCCGGATGTTCTCGATCTGCTGGCTCAAGCTCTTGAAGGGTGGTGTCCACCTCG
AGGTCACGGTCACGAAACCTGCCCCGGCGGCCGCTCGA

16507.1.edit

AGCGTGGTCGCGGCCGAGGTCAAGAACCCCGCCCGCACCTGCCGTGACCTCAAGATGTGCCACTCTGACTGGAAGA
GTGGAGAGTACTGGATTGACCCCAACCAAGGCTGCAACCTGGATGCCATCAAAGTCTTCTGCAACATGGAGACTGG
TGAGACCTGCGTGTACCCCACTCAGCCCACTGTGGCCAGAAAGAACTGGTACATCAGCAAGAACCCCAAGGACAAG
AGGCATGTCTGGTTTCGGCGAGAGCATGACCGATGGATTCCAGTTCGAGTATGGCGGCCAGGGCTCCGACCCTGCCG
ATGTGGACCTGCCCGNGCCGGNCCGCTCGAAAAGCCNAATTTCCAGNCACACTTGCCCGGCCGTTACTACTG

16507.2.edit

TCGAGCGGCCGCCCCGGGCAGGTCCACATCGGCAGGGTCGGAGCCCTGGCCGCCATACTCGAACTGGAATCCATCGG
TCATGCTCTCGCCGAACCAGACATGCCTCTTGTCTTGGGGTCTTGCTGATGTACCAGTTCTTCTGGGCCACACT
GGGCTGAGTGGGGTACACGCAGGTCTCACCAGTCTCCATGTTGCAGAAGACTTTGATGGCATCCAGGTTGCAGCCT
TGGTTGGGGTCAATCCAGTACTCTCCACTCTTCCAGTCAGAGTGGCACATCTTGAGGTACGGCAGGTGCGGGCGG
GGTCTTGACCTCGGCCGCGACCACGCT

16508.1.edit

CGAGCGGCCGCCCCGGGCAGGTCCCCCCCCTTT
TTTTTTTTTTTTTTTTTT

16508.2.edit

AGCGTGGTCGCGGCCGAGGTCTGGCATTCTTTCGACTTCTCTCCAGCCGAGCTTCCCAGAACATCACATATCACTG
CAAAAATAGCATTGCATACATGGATCAGGCCAGTGGAAATGTAAAGAAGGCCCTGAAGCTGATGGGGTCAAATGAA
GGTGAATTCAAGGCTGAAGGAAATAGCAAATTCACCTACACAGTTCTGGAGGATGGTTGCACGAAACACACTGGGG
AATGGAGCAAAACAGTCTTTGAATATCGAACACGCAAGGCTGTGAGACTACCTATTGTAGATATTGCACCCTATGA
CATTGGTGGTCTGATCAAGAATTTGGTGTGGACGTTGGCCCTGTTTGCTTTTTATAAACCAAACTCTATCTGAAA
TCCCAACAAAAAAATTTAACTCCATATGTGNTCCTCTTGTTCTAATCTTGGCAACCAGTGCAAGTGACCGACAAA
ATTCCAGTTATTTATTTCCAAAATGTTTGGAAACAGTATAATTTGACAAAGAAAAAAGGATACTTCTTTTTTTTG
GCTGGTCCACCAAATACAATTCAAAGGCTTTTTGGTTTTATTTTTTANCCAATTCCAATTTCAAATGTCTCAA
TGGNGCTTATAATAAAATAAACTTTACCCTTNTTTNTGAT

Fig. 15TT

16509.1.edit

AGCGTGGTCGCGGCCGAGGTCTGGGATGCTCCTGCTGTCACAGTGAGATATTACAGGATCACTTACGGAGAAACAG
GAGGAAATAGCCCTGTCCAGGAGTTCAGTGTGCTGGGAGCAAGTCTACAGCTACCATCAGCGGCCTTAAACCTGG
AGTTGATTATACCATCACTGTGTATGCTGTCACTGGCCGTGGAGACAGCCCCGCAAGCAGCAAGCCAATTTCCATT
AATTACCGAACAGAAATTGACAAACCATCCAGATGCAAGTGACCGATGTTCAAGGACAACAGCATTAGTGTCAAGT
GGCTGCCTTCAAGTTCCTCTGTTACTGGTTACAGAAAGTAACCACCACTCCCAAAAATGGACCAGGACCAACAAAA
CTAAACTGCAGGTCCAGATCAAACAGAAAATGGACTATTGAAGGCTTGACGCCACAGTGGAGTATGTGGNTAG
NGTCTATGCTCAGAATCCCAAGCCGGAGAAAGTCAGCCTTCTGGTTTAGACTGCAGTAACCAACATTGATCGCCC
TAAAGGACTGGNCATTCACTTGGATGGTGGATGTCCAATTC

16509.2.edit

TCGAGCGGCCGCCCCGGGCAGGTCTTGCAGCTCTGCAGNGTCTTCTTCACCATCAGGTGCAGGGAATAGCTCATGG
ATTCCATCCTCAGGGCTCGAGTAGGTCAACCTGTACCTGGAACTTGCCCTGTGGGCTTTCCCAAGCAATTTTGA
TGAATCGACATCCACATCAGNGAATGCCAGTCTTTAGGGCGATCAATGTTGGTTACTGCAGTCTGAACCAGAGG
CTGACTCTCTCCGCTTGATTCTGAGCATAGACACTAACCACATACTCCACTGTGGGCTGCAAGCCTTCAATAGTC
ATTTCTGTTTGATCTGGACCTGCAGTTTTAAGTTTTTGGTGGTCTGNCCATTTTTGGGAAGTGGGGGGTACTC
TGTAACCAGTAACAGGGGAACCTGAAGGCAGCCACTTGACACTAATGCTGTTGTCTGAACATCGGTCACTTGCAT
CTGGGGATGGTTTTGACAATTTCTGGTTCGGCAAATTAATGGAAATTGGCTTGCTGCTTGGCGGGGCTGNCTCCAC
GGGCCAGTGACAGCATAC

16510.1.edit

TCGAGCGGCCGCCCCGGGCAGGTCTTGCAGCTCTGCAGTGTCTTCTTCACCATCAGGTGCAGGGAATAGCTCATGG
ATTCCATCCTCAGGGCTCGAGTAGGTCAACCTGTACCTGGAACTTGCCCTGTGGGCTTTCCCAAGCAATTTTGA
TGAATCGACATCCACATCAGTGAATGCCAGTCTTTAGGGCGATCAATGTTGGTTACTGCAGTCTGAACCAGAGG
CTGACTCTCTCCGCTTGATTCTGAGCATAGACACTAACCACATACTCCACTGTGGGCTGCAAGCCTTCAATAGTC
ATTTCTGTTTGATCTGGACCTGCAGTTTTAAGTTTTTGGTGGNCCTGNNCCATTTTTGGGGAAGGGGTGGTTACTC
TTGTAACCAGTAACAGGGGAACCTGAAGCAGCCACTTGACACTAATGCTGGTGGCCTGAACATCGGTCACTTGCAT
CTGGGATGGTTTTGGTCAATTTCTGTTCCGTAATTAATGGGAAATTGGCTTACTGGCTTGCGGGGGCTGTCTCCAG
GNCAGTGACAAGCATACACAGNGATGGGTATAATCAACTCCAGGTTTAAGGCCNCTGATGGTA

16510.2.edit

AGCGTGGTCGCGGCCGAGGTCTGGGATGCTCCTGCTGTCACAGTGAGATATTACAGGATCACTTACGGAGAAACAG
GAGGAAATAGCCCTGTCCAGGAGTTCAGTGTGCTGGGAGCAAGTCTACAGCTACCATCAGCGGCCTTAAACCTGG
AGTTGATTATACCATCACTGTGTATGCTGTCACTGGCCGTGGAGACAGCCCCGCAAGCAGTAAGCCAATTTCCATT
AATTACCGAACAGAAATTGACAAACCATCCAGATGCAAGTGACCGATGTTCAAGGACAACAGCATTAGTGTCAAGT
GGCTGCCTTCAAGTTCCTCTGTTACTGGTTACAGAGTAACCACCACTCCCAAAAATGGGACCAGGACCAACAAAA
ACTAAACTGCANGGTCCAGATCAAACAGAAATGACTATTGAAGGCTTGACGCCACAGTGGAGTATGTGGGTTAG
TGTCTATGCTCAGAATNCCAAGCGGAGAGAGTCAGCCTCTGGTTCAGACT

Fig. 15UU

16511.1.edit

TCGAGCGGCCCGCCGGGCAGGTCTCAGGACGTACCACCATGGCCTGGGCTCTGCTCCTCCTCACCCTC
CTCACTCAGGGCACAGGGTCTGGGCCAGTCTGCCCTGACTCAGCCTCCCTCCGCGTCCGGGTCTCCTGGACAGT
CAGTACCATCTCCTGCACTGGAACCAGCAGTGACGTTGGTGCTTATGAATTTGTCTCCTGGTACCAACAACACCC
AGGCAAGGCCCCCAAACATCATGATTTCTGAGGTCACTAAGCGGCCCTCAGGGGTCCCTGATCGCTTCTCTGGCTCC
AAGTCTGGCAACACGGCCTCCCTGACCGTCTCTGGGCTCCANGCTGAGGATGANGCTGATTATTACTGGAAGCTCA
TATGCAGGCAACAACAATTGGGTGTTCCGGCGGAAGGGACCAAGCTGACCGTNCTAAGGTCAAGCCCAAGGCTTGCC
CCCCTCGGTCACTCTGTTCCACCTCCTCTGAAGAAGCTTTCAAGCCAACAANGNCACACTGGGTGTGTCTCATA
AGTGGACTTTCTACCC

16511.2.edit

AGCGTGGTCGCGGCCGAGGTCTGTAGCTTCTGTGGGACTTCCACTGCTCAGGCGTCAGGCTCAGGTAGCTGCTGGC
CGCGTACTTGTTGTTGCTTTGNTTGGAGGGTGTGGTGGTCTCCACTCCCGCCTTGACGGGGCTGCTATCTGCCTTC
CAGGCCACTGTCACGGCTCCCGGTAGAAGTCACTTATGAGACACACCAGTGTGGCCTTGTTGGCTTGAAGCTCCT
CAGAGGAGGGTGGGAACAGAGTGACCGAGGGGGCAGCCTTGGGCTGACCTAGGACGGTCAGCTTGGTCCCTCCGCC
GAACACCCCAATTGTTGTTGCCTGCATATGAGCTGCAGTAATAATCAGCCTCATCCTCAGCCTGGAGCCCAGAGACN
GTCAAGGGAGGCCCGTGTGTTGCCAAGACTTGGAAGCCAGANAAGCGATCAGGGACCCCTGAGGGCCGCTTTACNGA
CCTCAAAAAATCATGAATTTGGGGGCCCTTGCCTGGNGTTGGTTGGTNACCAGNAAAACAAAATTTCAATAAAGC
ACCAACGTCACTGCTGGTTTCCAGTGCANGAANATGGTGAACCTGAANTGTCC

16512.1.edit

AGCGTGGTCGCGGCCGAGGTCCAGCATCAGGAGCCCCGCCTTGCCGGCTCTGGTCATCGCCTTTCTTTTTGTGGCC
TGAAACGATGTCATCAATTCGCAGTAGCAGAACTGCCGTCTCCACTGCTGTCTTATAAGTCTGCAGCTTCACAGCC
AATGGCTCCCATATGCCCAGTTCCTTCATGTCCACCAAAGTACCCGTCTCACCATTTACACCCCAGGTCTCACAGT
TCTCCTGGGTGTGCTTGCCCCGAAGGGAGGTAAGTANACGGATGGTGCTGGTCCCACAGTTCTGGATCAGGGTACG
AGGAATGACCTCTAGGGCCTGGGCNACAAGCCCTGTATGGACCTGCCCGGGCGGGCCCGCTCGA

16512.2.edit

TCGAGCGGCCCGCCGGGCAGGTCCATACAGGGCTGTTGCCCAGGCCCTAGAGGNCATTCTTGTTACCCTGATCCAG
AACTGTGGGACCAGCACCATCCGTCTACTTACCTCCCTTCGGGCCAAGCACACCCAGGAGAACTGTGAGACCTGGG
GTGTAAATGGNGAGACGGGTACTTTGGTGGACATGAAGGAACTGGGCATATGGGAGCCATTGGCTGNGAAGCTGCA
NACTTATAAGACAGCAGTGGAGACGGCAGTTCTGCTACTGCGAATTGATGACATCGTTTCAGGCCACAAAAGAAA
GGCGATGACCANAGCCGGCAAGGCGGGGCTTCTGATGCTGGACCTCGGCCGCCGACCACGCTT

16514.1.edit

AGCGTGGTCGCGGCCGAGGTCCACTAGAGGTCTGTGTGCCATTGCCAGGCAGAGTCTCTGCGTTACAAACTCCTA
GGAGGGCTTGCTGTGCGGAGGGCCTGCTATGGTGTGCTGCGGTTTCATCATGGAGAGTGGGGCCAAAGGCTGCGAGG
TTGTGGTGTCTGGGAACTCCGAGGACAGAGGGCTAAATCCATGAAGTTTGTGGATGGCCTGATGATCCACAGCGG
AGACCCTGTAACTACTACGTTGACACTGCTGTGCGCCACGTGTTGCTCANACAGGGTGTGCTGGGCATCAAGGTG
AAGATCATGCTGCCCTGGGACCCANCTGGCAAAAATGGCCCTTAAAAACCCCTTGCCNTGACCACGTGAACCATTT
GTGNGAACCCCAAGATGAANATACTTGCCACCAACCCCCCATTC

16514.2.edit

TCGAGCGGCCGCGCCGGGCAGGTCTGCCAAGGAGACCCTGTTATGCTGTGGGGACTGGCTGGGGCATGGCAGGCGGC
TCTGGCTTCCACCCCTTCTGTTCTGAGATGGGGGTGGTGGGCAGTATCTCATCTTTGGGTTCCACAATGCTCACGT
GGTCAGGCAGGGGCTTCTTAGGGCCAATCTTACCAGTTGGGTCCAGGGCAGCATGATCTTCACCTTGATGCCAG
CACACCCTGTCTGAGCAACACGTGGCGCACAGCAGTGTCAACGTAGTAGTTAACAGGGTCTCCGCTGTGGATCATC
AGGCCATCCACAACTTCATGGATTTAGCCCTCTGTCTCGGAGTTTCCCAAAACACCACAACCTCGCCAGCCTTT
GGGCCCCACTTCTTCATGAATGAAACCGCAGCACACCATTANCAAGGCCCTTCCGCACAGGNAAGCCCTTCCTAAG
GAGTTTTGTAAACGCAAAAACTCTTGCTGCGGGCAAATGGGCACACAGACCTNTANTNGGACCTTGGNCCGCGAA
CCACCGCTT

16515.1.edit

AGCGTGGTCGCGGCCGAGGTCTGGCCCTCCTGGCAAGGCTGGTGAAGATGGTCACCCTGGAAAACCCGGACGACCT
GGTGAGAGAGGAGTTGTTGGACCACAGGGTGCTCGTGGTTTCCCTGGAACCTCCTGGACTTCTGGCTTCAAAGGCA
TTAGGGGACACAATGGTCTGGATGGATTGAAGGGACAGCCCGGTGCTCCTGGTGTGAAGGGTGAACCTGGNGCCCC
TGGTGAAAATGGAACCTCAGGTCAAACAGGAGCCCGNGGGCTTCTGGNGAGAGAGGACGTGTTGGTGCCCCCTGGC
CCANACCTGCCCCGGGCGGCCGCTCNAAGCCGAAATCCAGNACACTGGCGGCCGNTACTANTGGAATCCGAACCTT
CGGTACCAAAGCTTGGCCGTAATCATGGCCATAGCTTGTTCCTGGGGNGGAAATTGGTATTCCGCTNCCAATTCC
ACACAACATACCGAACCCGGAAAGCATTAAAGTGAAAAGCCCTGGGGGGGCCTAAATGANGTGAGCNTAACTCNC
ATTTAATTGGCGTTGCGCTTCACTGCCCCGCTTTTCCAGTCCGGGNA

16515.2.edit

TCGAGCGGCCGCGCCGGGCAGGTCTGGGCCAGGGGCACCAACACGTCTCTCACCAGGAAGCCACGGGCTCCTG
TTTGACCTGGAGTTCCATTTTACCAGGGGCACCAAGTTTACCCTTCACACCAGGAGACCGGGCTGTCCCTTCAA
TCCATCCAGACCATTTGTGNCCCTAATGCCTTTGAAGCCAGGAAGTCCAGGAGTTCCAGGGAAACCACGAGCACCC
TGTGGTCCAACAACTCTCTCACCAGGTGTCGGGTTTTCCAGGGTGACCATCTTCACCAGCCTTGCCAGGAG
GGCCAGACCTCGGCCGCGACCACGCT

16516.1.edit

ANCGTGGTCGCGGCCGAGGTCCTCACCAGAGGTGNCACCTACAACATCATAGTGGAGGCACTGAAAGACCANCAGA
GGCATAAGGTTCCGGAAGAGG

16516.2.edit

TCGAGCGGCCGCCCCGGGCAGGTCCATTTCTCCCTGACGGTCCCACTTCTCTCCAATCTTGTAGTTCACACCATTG
TCATGGCACCATCTAGATGAATCACATCTGAAATGACCACTTCCAAAGCCTAAGCACTGGCACAACAGTTTAAAGC
CTGATTGAGACATTCGTTCCCACTCATCTCCAACGGCATAATGGGAACTGTGTAGGGGTCAAAGCACGAGTCATC
CGTAGGTTGGTTCAAGCCTTCGTTGACAGAGTTGTCCACGGTAACAACCTCTTCCCGAACCTTATGCCTCTGCTGG
TCTTTTCAGTGCCTCCACTATGATGTTGTAGGTGGCACCTCTGGTGAGGACCTCNGNCCNGAACAAACGCTTAAGCCC
GNATTCTGCAGAATAATCCCATCACACTTGGCGGCCGCTTCGANCATGCATCNTAAAGGGGGCCCCAATTTCCCCC
TTATAAGNGAANCCGTATTTNCCAATTTCACTGGNCCCGCCGNTTTTACAAACGNCGGTGAAGTGGGGAAAAACCC
TGGCGGTTACCCAACCTTTAATCGCCNTTGGCAGCACAAATCCCCCTTTTCGNCCANCNTGGGCGTAAATAACCGAA
AA

16517.1.edit

ANCGNGGTCGCGGCCGANGTNTTTTTCTTNTTTTTT

16518.1.edit

AGCGTGGTCGCGGCCGAGGTCTGAGGTTACATGCGTGGTGGTGACGTGAGCCACGAAGACCCTGAGGTCAAGTTC
AACTGGTACGTGGACGGCGTGGAGGTGCATAATGCCAAGACAAAGCCGCGGGAGGAGCAGTACAACAGCACGTACC
GGGNGGTCAGCGTCCTCACCGTCCTGCACCAGAATTGGTTGAATGGCAAGGAGTACAAGNGCAAGGTTTCCAACAA
AGCCNTCCAGCCCCNTCGAAAAAACCATTTCCAAAGCCAAAGGGCAGCCCCGAGAACCACAGGTGTACACCCTG
CCCCCATCCCGGGAGGAAAAGANCAANAACCGGTTGAGCCTTAAGTTGCTTGGTCNAANGCTTTTTATCCCAACG
NACTTCCCCNTGGAANTGGGAAAAACCAATGGGCCAANCCGAAAAACAATTACAANAACCC

16518.2.edit

TCGAGCGGCCGCCCCGGGCAGGTGTGCGAGTCCAGCACGGGAGGCGTGGTCTTGTAGTTGTTCTCCGGCTGCCCATT
GCTCTCCCACTCCACGGCGATGTGCTGGGATAGAAGCCTTTGACCAGGCAGGTGAGGCTGACCTGGTTCTTGGTC
ATCTCCTCCCGGGATGGGGCAGGGTGAACACCTGGGGTTCTCGGGGCTTGCCCTTTGGTTTTGAANATGGTTTTT
TCGATGGGGGCTGGAAGGGCTTTGTTGNAAACCTTGCACTTGACTCCTTGCCATTACCCAGNCCTGGNGCAGGAC
GGNGAGGACNCTNACCACACGGAACCGGGCTGGTGGACTGCTCC

16519.1.edit

AGCGTGGTCGCGGACGANGTCCTGTCAGAGTGGNACTGGTAGAAGTTCCANGAACCTGAACTGTAAGGGTTCTTC
ATCAGTGCCAACAGGATGACATGAAATGATGTACTCAGAAGNGNCCTGGAATGGGGCCCATGANATGGTTGCC

16519.2.edit

TCGAGCGGCCGCGCGGGCAGGTCCACCACACCCAATTCCTTGCTGGTATCATGGCAGCCGCCACGTGCCAGGATTA
CCGGCTACATCATCAAGTATGAGAAGCCTGGGTCTCCTCCCAGAGAAGTGGTCCCTCGGCCCCGCCCTGGTGTAC
AGAGGCTACTATTACTGGCCTGGAACCGGAACCGAATATACAATTTATGTCATTGCCCTGAAGAATAATCAGAAG
AGCGAGCCCCTGATTGGAAGGAAAAAGACAGACGAGCTTCCCCAACTGGTAACCTTCCACACCCCAATCTTCATG
GACCAGAGATCTTGGATGTTCTTCCACAGTTCAAAAGACCCCTTTCGGCACCCCCCTGGGTATGAACCTGGGAA
AANGGNANTTAANCTTCTCGGCA

16520.1.edit

AGCGTGGTCGCGGCCGAGGTCTGGGATGCTCCTGCTGTACAGTGAGATATTACAGGATCACTTACGGAGAAACAG
GAGGAAATAGCCCTGTCCAGGAGTTCAGTGTGCTGGGAGCAAGTCTACAGCTACCATCAGCGGCCTTAAACCTGG
AGTTGATTATACCATCACTGTGTATGCTGTCACTGGCCGTGGAGACAGCCCCGCAAGCAGCAAGCCAATTTCCATT
AATTACCGAACAGAAATTGACAAACCATCCAGATGCAAGTGACCGATGTTGAGGACAACAGCATTAGTGTCAAGT
GGCTGCCTTCAAGGTNCCCTGGTACTGGGTTACAGANTAACCACCACTCCCAAAAATGGACCAGGAACCACAAAAA
CTTAAACTGCAGGGTCCAGATCAAAACAGAAATGACTATTGAANGCTTGACGCCACAGTGGGAGTATGNGGGTAG
TGNCATGCTTCAGAATCCAAGCGGAAAAANGTCAAGCCTTNTGGGTTCAA

16520.2.edit

TCGAGCGGCCGCGCGGGCAGGTCTTGCAGCTCTGCAGTGTCTTCTTACCATCAGGTGCAGGGAATAGCTCATGG
ATTCCATCCTCAGGGCTCGAGTAGGTCAACCTGTACCTGGAACTTGCCCCTGTGGGCTTTCCCAAGCAATTTGA
TGGAATCGACATCCACATCAGTGAATGCCAGTCTTTAGGGCGATCAATGTTGGTTACTGCAGNCTGAACCAGAGG
CTGACTCTCTCCGCTTGGATTCTGAGCATAGACACTAACCACATACTCCACTGTGGGCTGCAANCCTTCAATAANN
CATTTCTGTTTGATCTGGACC

16521.2.edit

TCGAGCGGCCGCGCGGGCAGGTCTGGTGGGGTCTGGCACACGCACATGGGGGNGTTGNTCTNATCCAGCTGCCCCA
GCCCCATTGGCGAGTTTGAGAAGGTGTGCAGCAATGACAACANACCTTCGACTCTTCTGCCACTTCTTTGCCA
CAAAGTGCAACCTGGAGGGCACCAAGAAGGGCCACAAGCTCCACCTGGACTACATCGGGCCTTGCAAATACATCCC
CCCTTGCTGGACTCTGAGCTGACCGAATCCCCCTTGGCATGCGGGACTGGCTCAAGAACCGTCTGGCACCCCT
TGTATGANAGGGATGAAGACACNACCC

16522.1.edit

AGCGTGGTCGCGGCCGAGGTCTGTCCTACAGTCCTCAGGACTCTACTCCCTCAGCAGCGTGGTGACCGTGCCCTCC
AGCAACTTCGGCACCCAGACCTACACCTGCAACGTAGATCACAAGCCCAGCAACACCAAGGTGGACAAGAGAGTTG
AGCCCAAATCTTGTGACAAAACCTCACACATGCCACCGTGCCACAGCACTGAACTCCTGGGGGGACCGTCAGTCTT
CCTCTTCCCCCGCATCCCCCTTCCAAACCTGCCCGGGCGGCCGCTCGAAAGCCGAATTCAGCACACTGGCGGCCG
GTACTAGTGGANCCNAACCTTGGNANCCAACCTGGNGGAANTAATGGGCATAANCTGTTTCTGGGGGGAAATTGGTA
TCCNGTTTACAATTCCCNACAAACATACGAGCCGGAAGCATAAAAGNGTAAAAGCCTGGGGGNGGCCTANTGAAGT
GAAGCTAAACTCACATTAATTNGCGTTGCCGCTCACTGGCCCGCTTTTCCAGC

16522.2.edit

TCGAGCGGCCGCCCCGGGCAGGTTTGGAAAGGGGGATGCGGGGGAAGAGGAAGACTGACGGTCCCCCAGGAGTTCAG
GTGCTGGGCACGGTGGGCATGTGTGAGTTTTGTCACAAGATTTGGGCTCAACTCTCTTGTCCACCTTGGTGTTGCT
GGGCTTGTGATCTACGTTGCAGGTGTAGGTCTGGGNGCCGAAGTTGCTGGAGGGCACGGTCACCACGCTGCTGAGG
GAGTAGAGTCTGAGGACTGTANGACAGACCTCGGCCGNGACCACGCTAAGCCGAATTCTGCAGATATCCATCACA
CTGGCGGCCGCTCCGAGCATGCATTTTAGAGG

16523.1.edit

AGCGTGGNCGCGGACGANGACAACAACCCC

16523.2.edit

TCGAGCGGCCGCCCCGGGCAGGNCCACATCGGCAGGGTCTGGAGCCCTGGCCGCCATACTCGAACTGGAATCCATCGG
TCATGCTCTTGCCGAACCAGACATGCCTCTTGTCTTGGGGTTCTTGCTGATGNACCAGTTCTTCTGGGCCACACT
GGGCTGAGTGGGGTACACGCAGGTCTCACCAGTCTCCATGTTGCAGAAGACTTTGATGGCATCCAGGTTGCAGCCT
TGTTTGGGGTCAATCCAGTACTCTCCACTCTTCCAGTCAGAGTGGCACATCTTGAGGTACGGCAGGTGCGGGCGG
GGTTCTTGACCT

16524.1.edit

AGCGTGGTCGCGGCCGAGGTCCAGCCTGGAGATAANGGTGAAGGTGGTGCCCCCGGACTTCCAGGTATAGCTGGAC
CTCGTGGTAGCCCTGGTGAGAGAGGTGAAACTGGCCCTCCAGGACCTGCTGGTTTTCCCTGGTGCTCCTGGACAGAA
TGGTGAACCTGGNGGTAAAGGAGAAAGAGGGGCTCCGNGTGANAAAGGTGAAGGAGGCCCTCCTGNATTGGCAGGG
GCCCCANGACTTAGAGGTGGAGCTGGCCCCCTGGCCCCGAAGGAGGAAAGGGTGCTGCTGGTCTCCTGGGCCAC
CTGG

16524.2.edit

TCGAGCGGCCGCCCCGGGCAGGTCTGGGCCAGGAGGACCAATAGGACCAGTAGGACCCCTTGGGCCATCTTTCCCTG
GGACACCATCAGCACCTGGACCGCCTGGTTCAACCTTGTACCCCTTTGGACCAGGACTTCCAAGACCTCCTCTTTC
TCCAGGCATTCTTGCAGACCAGGAGTACCANCAGCACCAGGTGGCCAGGAGGACCAGCAGCACCCCTTTCTCCTCT
TCGGGACCAGGGGGACCAGCTCCACCTCTAAGTCCTGGGGCCCCCTGCCAATCCAGGAGGGCCTCCTTCACCTTTCT
CACCCGGAGCCCCTCTTTCT

16526.1.edit

TCGAGCGGCCGCCCCGGGCAGGTCCACCGGGATATTCGGGGGTCTGGCAGGAATGGGAGGCATCCAGAACGAGAAGG
AGACCATGCAAAGCCTGAACGACCGCCTGGCCTCTTACCTGGACAGAGTGAGGAGCCTGGAGACCGACAACCGGAG
GCTGGAGAGCAAATCCGGGAGCACTTGGAGAAGAAGGGACCCAGGTGAGAGACTGGAGCCATTACTTCAAGATC
ATCGAGGACCTGAGGGCTCANATCTTCGCAAATACTGCNGACAATGCCCG

16526.2.edit

ATGCGNGGTCGCGGCCGANGACCANCTCTGGCTCATACTTGACTCTAAAGNCNTCACCAGNANTTACGGNCATTGC
CAATCTGCAGAACGATGCGGGCATTGTCCGCANTATTTGCGAAGATCTGAGCCCTCAGGNCCTCGATGATCTTGAA
GTAANGGCTCCAGTCTCTGACCTGGGGTCCCTTCTTCTCCAAGTGCTCCCGGATTTTGCTCTCCAGCCTCCGGTTC
TCGGTCTCCAAGNCTTCTCACTCTGTCCAGGAAAAGAGGCCAGGCGGNCGATCAGGGCTTTTGCATGGACT

16527.1.edit

AGCGTGGTCGCGGCCGAGGTTGTACAAGCTTT
TT

16527.2.edit

TCGAGCGGCCGCCCCGGGCAGGTCTGCCAACACCAAGATTGGCCCCCGCCGCATCCACACAGTTNGTGTGCGGGGAG
GTAACAAGAAATACCGTGCCCTGAGGNTGGACGNGGGGAATTTCTCCTGGGGCTCAGAGTGTTGTACTCGTAAAC
AAGGATCATCGATGTTGTCTACAATGCATCTAATAACGAGCTGGTTCGTACCAAGACCCTGGTGAAGAATTGCATC
GTGCTCATNGACAGCACACCGTACCGACAGTGGGTACCGAAGTCCCACTATGCNCCT

16528.1.edit

TCGAGCGGCCGCGCGGGCAGGTCCACCACACCCAATTCCTTGCTGGTATCATGGCAGCCGCCACGTGCCAGGATTA
CCGGCTACATCATCAAGTATGAGAAGCCTGGGTCTCCTCCCAGAGAAGTGGTCCCTCGGCCCCGCCCTGGTGTAC
AGAGGCTACTATTACTGGCCTGGAACCGGAACCGAATATACAATTTATGTCATTGCCCTGAAG

16528.2.edit

AGCGTGNTCNCGGCCGAGGATGGGGAAGCTCGNCTGTCTTTTTCTTCCAATCAGGGGCTNNNTCTTCTGATTATT
CTTCAGGGCAANGACATAAATTGTATATTCGGNTCCCGGTTCCAGNCCAGTAATAGTAGCCTCTGTGACACCAGGG
CGGGGCCGAGGGACCACTTCTCTGGGAGGAGACCCAGGCTTCTCATACTTGATGATGAAGCCGGTAATCCTGGCAC
GTGGGCGGCTGCCATGATACCACCAANGAATTGGGTGTGGTGGACCTGCCCCGGGCGGGCCGCTCGAAAANCCGAAT
TCNTGCAAGAATATCCATCACACTTGGGCGGGCCGNTCGAACCATGCATCNTAAAAGGGCCCCAATTTCCCCCCTA
TTAGGNGAAGCCNCATTTAACAAATTCACCTTGG

16529.1.edit

TCGAGCGGCCGCGCGGGCAGGTCTCGCGGTGCGACTGGTGATGCTGGTCCTGTTGGTCCCCCGGCCCTCCTGGAC
CTCCTGGTCCCCCTGGTCTCCAGCGCTGGTTTTGACTTCAGCTTCCTGCCCCAGCCACCTCAAGAGAAGGCTCA
CGATGGTGGCCGCTACTACCGGGCTGATGATGCCAATGTGGTTCGTGACCGTGACCTCGAGGTGGACACCACCTC
AAGAGCCTTGAGCCAGCAGAATCGAAAACATTGGAACCCAAGAAGGGCAAGCCCGCAAAGAAACCCGCGCCGCAC
CTGGCCGNGAACCTCCAAGAANGTGCCACACNTCTTGACTGGGAAAAAAGGGAAAANTACTTGGAATTGGAC

16529.2.edit

AGCGTGGTCGCGGCCGAGGTCCACATCGGCAGGGTCGGAGCCCTGGCCGCCATACTCGAACTGGAATCCATCGGTC
ATGCTCTCGCCGAACCAGACATGCCTCTTGTCTTGGGGTTCTTGCTGATGTACCAGTTCTTCTGGGCCACACTGG
GCTGAGTGGGGTACACGCAGGTCTCACCAGTCTCCATGTTGCAGAAGACTTTGATGGCATCCAGGTTGCAGCCTTG
GTTGGGTCAATCCAGTACTCTCCACTCTTCCAGTCAGAAGTGGCACATCTTGAGGTACGGCAGGGTGCGGGCGG
GGTTCTTGCGGGCTGCCCTTCTGGGCTCCCGGAATGTTCTNNGAAGTTGCTGG

16530.1.edit

AGCGTGGTCGCGGCCGAGGTCCACTAGAGGTCTGTGTGCCATTGCCAGGCAGAGTCTCTGCGTTACAACTCCTA
GGAGGGCTTGCTGTGCGGAGGGCCTGCTATGGTGTGCTGCGGTTTCATCATGGAGAGTGGGGCCAAAGGCTGCGAGG
TTGTGGTGTCTGGGAACTCCGAGGACAGAGGGCTAAATCCATGAAGTTTGTGGATGGCCTGATGATCCACAGCGG
AGACCTGTAACTACTACGTTGACACTTGCTTGTGCGCCACGTGTTGCTCANACANGGGTGGGCTGGGCATCAAG
GNG

16530.2.edit

TCGAGCGGCCGCCCCGGGCAGGTCTGCCAAGGAGACCCTGTTATGCTGTGGGGACTGGCTGGGGCATGGCAGGCGGC
TCTGGCTTCCCACCCTTCTGTTCTGAGATGGGGTGGTGGGCAGTATCTCATCTTTGGGTTCCACAATGCTCACGT
GGTCAGGCAGGGGCTTCTTAGGGCCAATCTTACCAGTTGGGTCCCAGGGCAGCATGATCTTACCTTGATGCCAG
CACACCCTGTCTGAGCAACACGTGGCGCACAGCAAGTGTCAACGTAAGTAAGTTAACAGGGTCTCCGCTGTGGATC
ATCAGGCCATCCACAACTTCATGGATTTAACCCTCTGTCCTCGGAG

16531.1.edit

TCGAGCGGCCGCCCCGGGCAGGTGTTTCAGAGGTTCCAAGGTCCACTGTGGAGGTCCCAGGAGTGCTGGTGGTGGGC
ACAGAGGTCCGATGGGTGAAACCATTGACATAGAGACTGTTCTGTCCAGGGTGTAGGGGCCAGCTCTTTGATGC
CATTGGCCAGTTGGCTCAGCTCCCAGTACAGCCGCTCTCTGTTGAGTCCAGGGCTTTTGGGGTCAAGATGATGGAT
GCAGATGGCATCCACTCCAGTGGCTGCTCCATCCTTCTCGGACCTGAGAGAGGTGAGTCTGCAGCCAGAGTACAGA
GGGCCAACACTGGTGTTCCTTTGAATA

16531.2.edit

AGCGTGGTCGCGGCCGAGGTCTGTACTGGGAGCTAAGCAAAGTACCAATGACATTGAAGAGCTGGGCCCCTACAC
CCTGGACAGGAACAGTCTCTATGTCAATGGTTTCACCCATCAGAGCTCTGTGNCCACCACCAGCACTCCTGGGACC
TCCACAGTGGATTTGAGAACCTCAGGGACTCCATCCTCCTCTCCAGCCCCACAATTATGGCTGCTGGCCCTCTCC
TGGTACCATTACCCCTCAACTTCACCATCACCAACCTGCAGTATGGGGAGGACATGGGTACCCCTGNCTCCAGGAA
GTTCAACACCACA

16532.1.edit

TCGAGCGGCCGCCCCGGACAGGTCTGGGCGGATAGCACCGGGCATATTTTGGGAATGGATGAGGTCTGGCACCCCTGAG
CAGTCCAGCGAGGACTTGGTCTTAGTTGAGCAATTTGGCTAGGAGGATAGTATGCAGCACGGNTCTGAGNCTGTGG
GATAGCTGCCATGAAGTAACCTGAAGGAGGTGCTGGCTGGTANGGGTTGATTACAGGGTTGGGAACAGCTCGTACA
CTTGCCATTCTCTGCATATACTGGTTAGTGAGGTGAGCCTGGCCCTCTTCTTTTG

Fig. 15CCC

01_16558.3.edit

AGCGTGGTCGCGGCCGAGGTGAGCCACAGGTGACCGGGGCTGAAGCTGGGGCTGCTGGNCCTGCTGGTCCTG

02_16558.4.edit

CAGCNGCTCCNACGGGGCCTGNGGGACCAACAACACCGTTTTACCCCTTAGGCCCTTTGGCTCCTCTTTCTCCTTT
AGCACCAGGTTGACCAGCAGCNCCANCAGGACCAGCAAATCCATTGGGGCCAGCAGGACCGACCTCACCACGTTCA
CCAGGGCTTCCCCGAGGACCAGCAGGACCAGCAGGACCAGCAGCCCCAGCTTCGCCCCGGTCACCTGTGGCTCACC
TCGGCCGCGACCACGCT

03_16535.1.edit

TCGAGCGGTCGCCCCGGGCAGGTCCACCGGGATAGCCGGGGGTCTGGCAGGAATGGGAGGCATCCAGAACGAGAAGG
AGACCATGCAAAGCCTGAACGACCGCCTGGCCTCTTACCTGGACAGAGTGAGGAGCCTGGAGACCGANAACCGGAG
GCTGGANAGCAAATCCGGGAGCACTTGAGAAGAAGGGACCCAGGTCAAGAGACTGGAGCCATTACTTCAAGAT
CATCGAGGGACCTGGAGG

04_16535.2.edit

AGCGNGGTGCGCGGCCGAGGTCCAGCTCTGTCTCATACTTGACTCTAAAGTCATCAGCAGCAAGACGGGCATTGTCA
ATCTGCAGAACGATGCGGGCATTGTCCGCAGTATTTGCGAAGATCTGAGCCCTCAGGTCTCGATGATCTTGAAGT
AATGGCTCCAGTCTCTGACCTGGGGTCCCTTCTTCTCCAAGTGCTCCCGGATTTTGCTCTCCAGCCTCCGGTTCTC
GGTCTCCAGGCTCCTCACTCTGTCCAGGTAAGAAGGCCAGGCGGTCTTCAGGCTTTGCATGGTCTCCTTCTCGT
TCTGGATGCCTCCCATTCCTGCCAGACCC

05_16536.1.edit

TCGAGCGGCCGCCCCGGGCAGGTCAGGAAGCACATTGGTCTTAGAGCCACTGCCTCCTGGATTCCACCTGTGCTGCG
GACATCTCCAGGGAGTGCGAAGGGAAGCAGGTCAAACCTGCTCAGATCAGTCAGACTGGCTGTTCTCAGTTCTCAC
CTGAGCAAGGTCAGTCTGCAGCCAGAGTACAGAGGGCCAACACTGGTGTCTTGAACAAGGGCTTGAGCAGACCT
GCAGAACCTCTTCCGTGGTGTTGAACCTCCTGGAAACCAGGGTGTTGCATGTTTTCTCATAATGCAAGGTTGG
TGATGG

Fig. 15DDD

07_16537.1.edit

AGCGTGGTCGCGGCCGAGGTCCACATCGGCAGGGTCGGAGCCCTGGCCGCCATACTCGAACTGGAATCCATCGGTC
ATGCTCTCGCCGAACCAGACATGCCTCTTGTCCTTGGGGTTCTTGCTGATGTACCAAGTTCTTCTGGGCCACACTGG
GCTGAGTGGGGTACACCGCAGGTCTCACCAGTCTCCATGTTGCAGAAGACTTTGATGGCATCCAGGTTGCAGCCTT
GGTTGGGGTCAATCCAGTACTCTCCACTCTTCCAGTCAGAAGTGGGCACATCTTGAGGTACACGGCAGGTGCCGGG
CCGGGGGTTCTTGCGGCTTGCCCTCTGGGCTCCGGATGTTCTCGATCTGCTTGGCTCAGGCTCTTGAGGGTGGGTG
TCCACCTCGAGGTCACGGTCACCGAAACCTGCCCGGGCGGCCCGCTCGA

08_16537.2.edit

TCGAGCGGTGCGCCGGGCAGGTTTCGTGACCGTGACCTCGAGGTGGACACCACCCTCAAGAGCCTGAGCCAGCAGA
TCGAGAACATCCGGAGCCCAGAGGGCAGCCGCAAGAACCCCGCCCGCACCTGCCGTGACCTCAAGATGTGCCACTC
TGACTGGAAGAGTGGAGAGTACTGGATTGACCCCAACCAAGGCTGCAACCTGGATGCCATCAAAGTCTTCTGCAAC
ATGGAGACTGGTGAGACCTGCGTGTACCCCACTCAGCCCAGTGTGGGCCCCAGAAGAACTGGTACATCAGCAAGGA
ACCCCAAGGACAAGAGGCATTGTCTTGTTTCGGCGAGNAGCATGACCCGATGGATTCCAGTTTCGAGTATTGGCGG
CCAGGGCTTCCCGACCCTTGCCGATGTGGACCTCGGCCGCGACCACCGCT

Fig. 15EEE

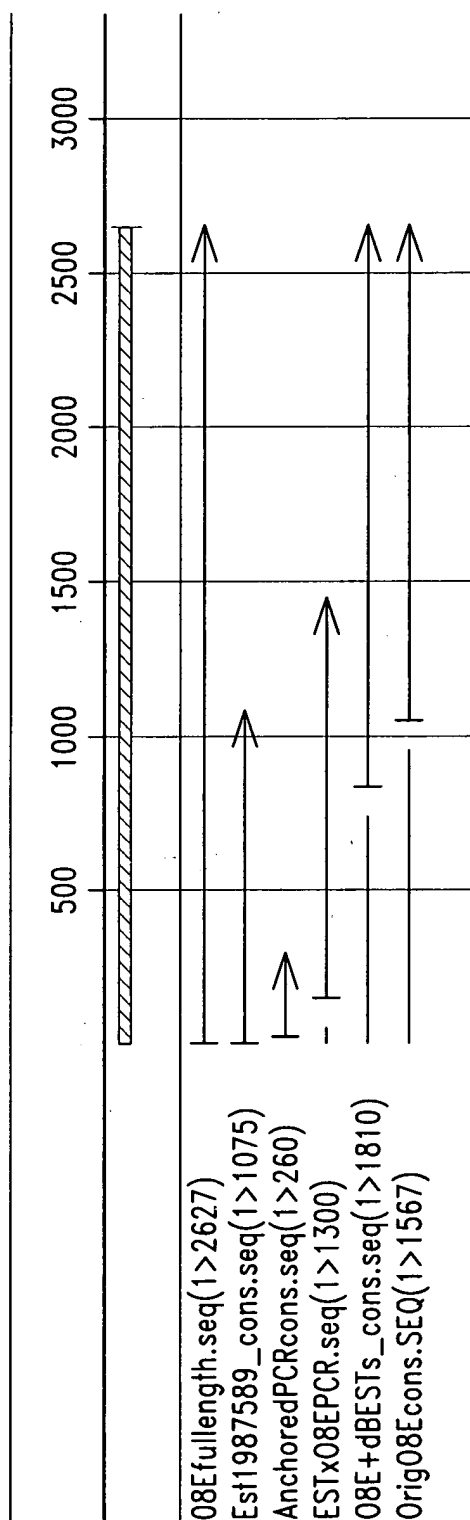


Fig. 16

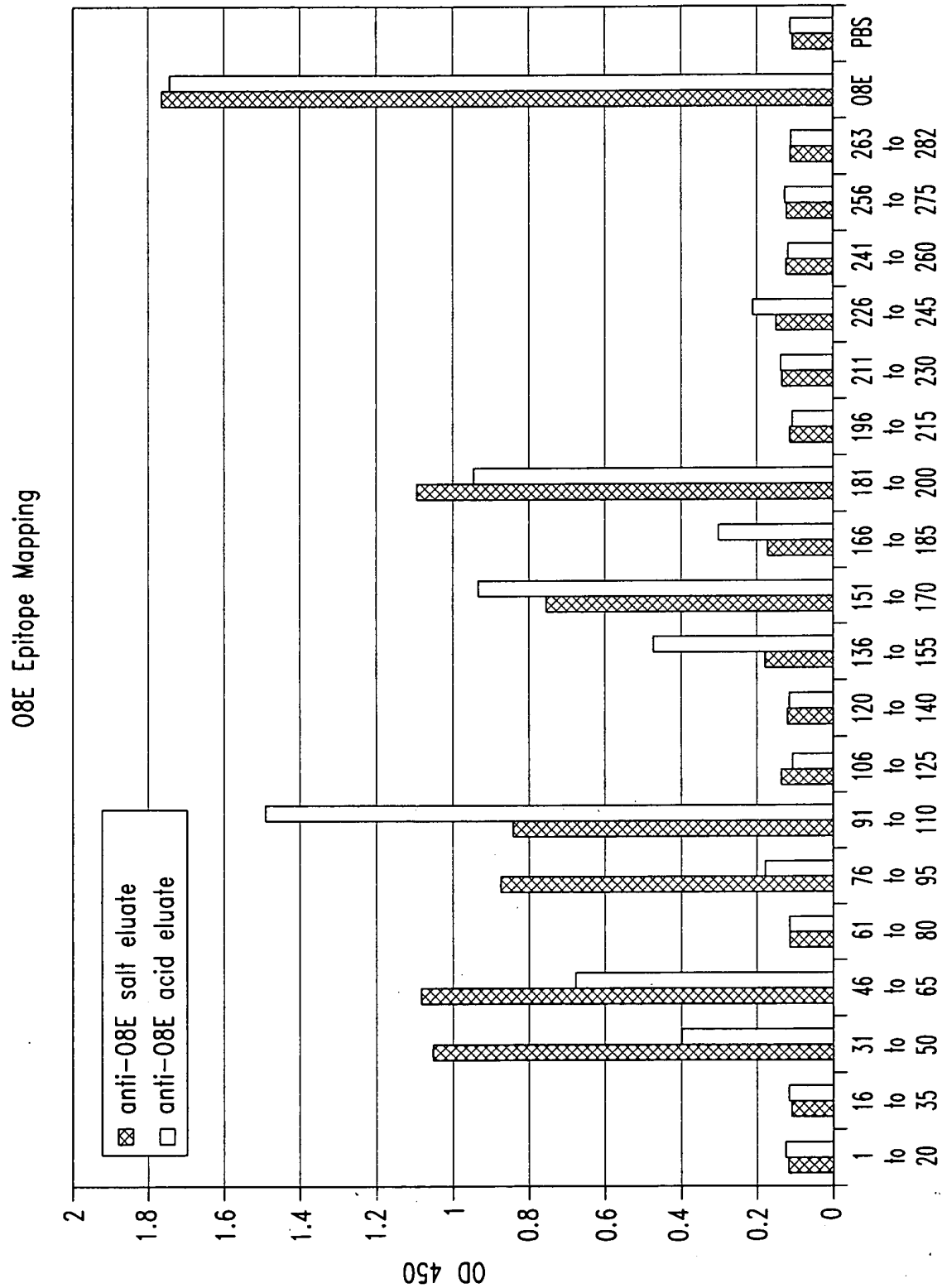
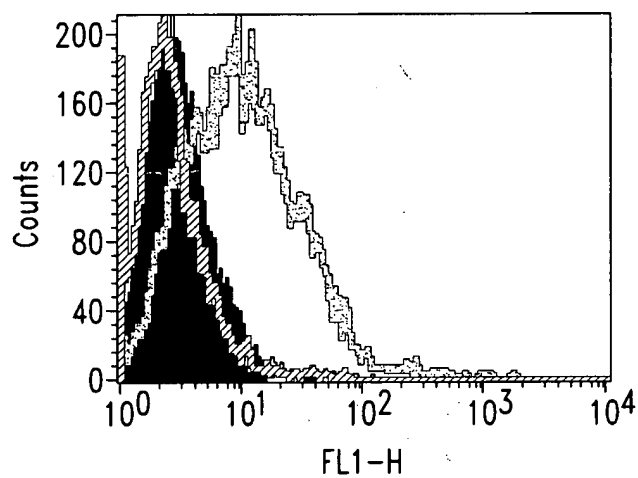


Fig. 17

O8E Surface Expression



- B305D/HEK stained with anti-O8E antibody
- O8E/HEK stained with anti-O8E antibody
- /// O8E/HEK stained with an irrelevant antibody

Fig. 18

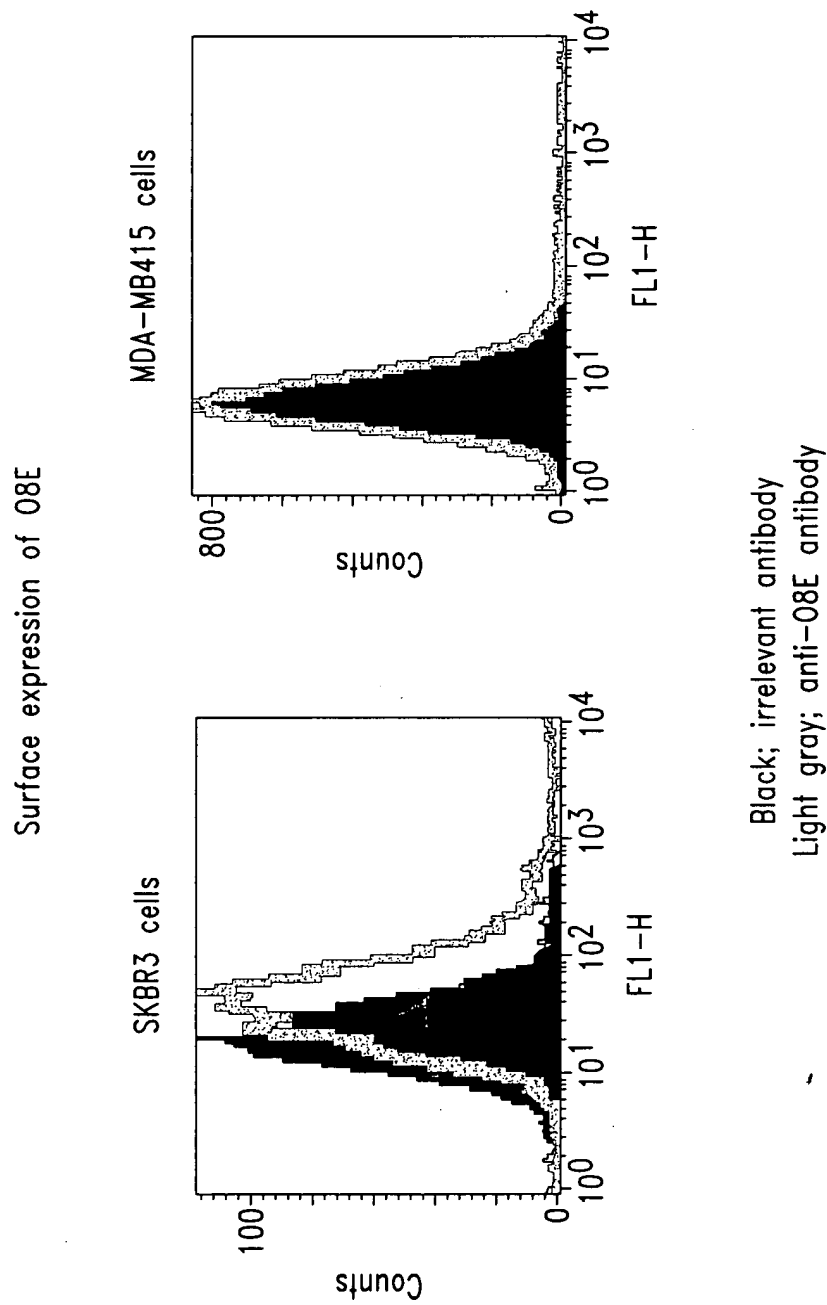
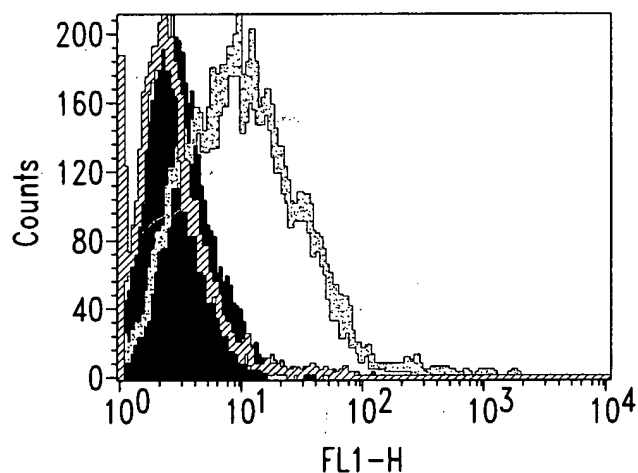


Fig. 19

O8E Surface Expression



- B305D/HEK stained with anti-O8E antibody
- O8E/HEK stained with anti-O8E antibody
- ▨ O8E/HEK stained with an irrelevant antibody

Fig. 20

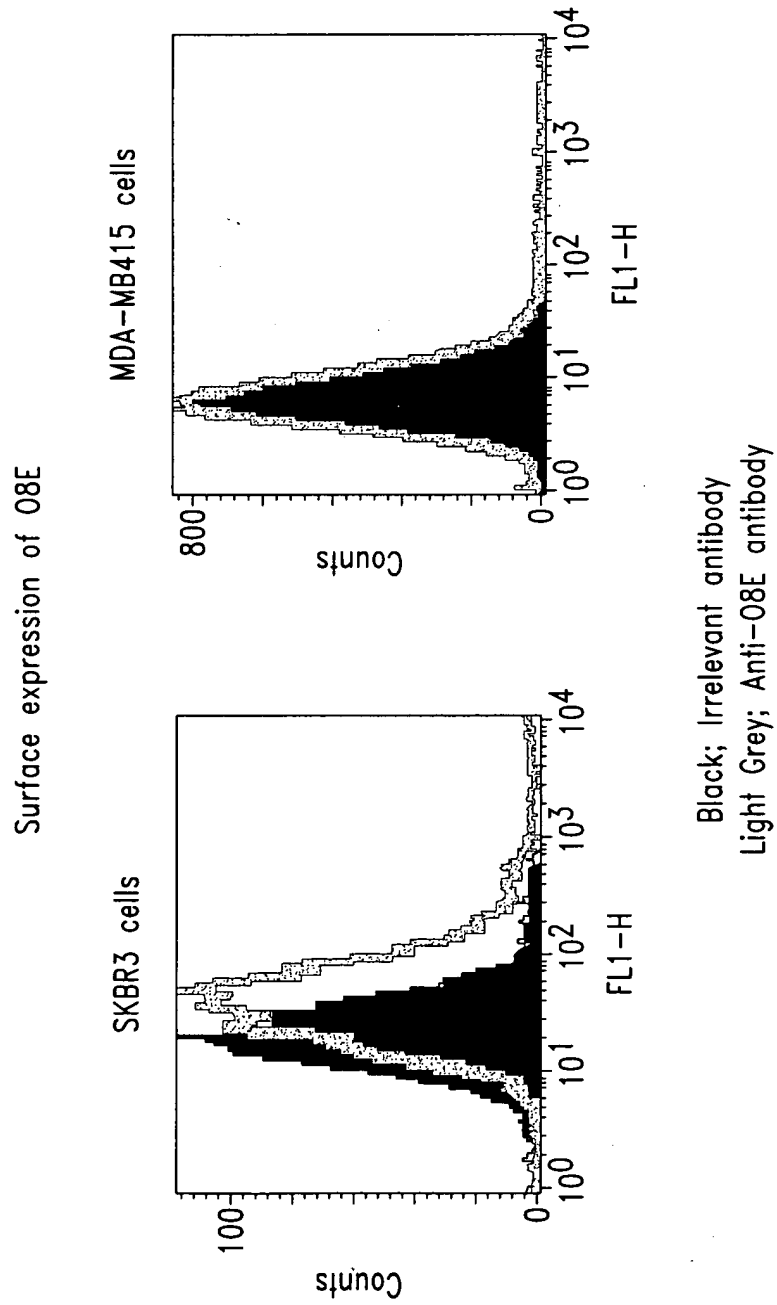


Fig. 21

O8E expression in HEK293 Cells
(probed with anti-O8E rabbit polyclonal sera #2333L)



Fig. 22

08E Rabbits 01212000

Date: 1/21/99

Antigen on Plate	Sera Sample	Antibody Dilutions													
		1:1000	1:2000	1:4000	1:8000	1:16000	1:32000	1:64000	1:128000	1:256000	1:512000	1:1024000	1:2048000		
08E (#632-24)	Preimmune sera (#2576L):11/10/99	0.13	0.09	0.08	0.07	0.07	0.07	0.07	0.06	0.07	0.07	0.07	0.07	0.07	
	Average	0.10	0.08	0.07	0.07	0.07	0.07	0.07	0.06	0.06	0.07	0.06	0.07	0.07	
	α -08E (#2576K):1/11/2000	0.11	0.08	0.07	0.07	0.07	0.07	0.07	0.06	0.07	0.07	0.06	0.07	0.07	
	Average	2.92	2.81	2.74	2.70	2.58	2.08	1.61	1.01	0.68	0.40	0.24	0.15	0.15	
	Preimmune sera (#2333L):11/10/99	2.93	2.77	2.74	2.69	2.48	2.08	1.57	1.00	0.66	0.40	0.23	0.16	0.16	
	Average	2.93	2.79	2.74	2.69	2.53	2.08	1.59	1.00	0.67	0.40	0.23	0.16	0.16	
	Preimmune sera (#2333L):11/10/99	0.09	0.07	0.06	0.06	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	
	Average	0.08	0.07	0.06	0.07	0.10	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	
	α -08E (#2333L):1/11/2000	0.08	0.07	0.06	0.06	0.08	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	
	Average	2.73	2.75	2.64	2.48	2.30	1.78	1.41	0.92	0.58	0.32	0.20	0.14	0.14	
	Average	2.73	2.76	2.51	2.60	2.37	1.93	1.44	0.88	0.58	0.35	0.20	0.14	0.14	
	Average	2.73	2.76	2.57	2.54	2.33	1.85	1.43	0.90	0.58	0.33	0.20	0.14	0.14	

Fig. 23

affi-pure O8E #2576L 739.87A&B

Date: 5/2/2000	
Antibody Name	O8E polyclonal
Rabbit #, Bleed Date	2576L, 1/11/2000
Purification Method	affinity
Buffer	PBS
Notebook	#705, p150
lot #	739.87A
Antibody Concentration	1.4mg/ml
Initial Amount	18mg
	739.87B
	1.7mg/ml
	3mg

Antigen on Plate	Sera Sample	Antibody Dilutions											
		1:1000	1:2000	1:4000	1:8000	1:16000	1:32000	1:64000	1:128000	1:256000	1:512000	1:1024000	1:2048000
O8E #632-24	preimmune sera (2576L)	0.15	0.11	0.09	0.08	0.08	0.07	0.07	0.07	0.07	0.08	0.07	0.08
	Average	0.14	0.10	0.09	0.08	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07
	α -O8E (2576K):2/8/2000	2.74	2.71	2.63	2.49	2.29	1.87	1.39	0.92	0.57	0.33	0.20	0.14
	Average	2.72	2.68	2.64	2.47	2.26	1.93	1.42	0.94	0.57	0.34	0.21	0.14
	affinity pure α -O8E poly	2.73	2.70	2.63	2.48	2.27	1.90	1.41	0.93	0.57	0.34	0.21	0.14
	salt peak 739-87A	2.69	2.60	2.50	2.21	1.83	1.34	0.99	0.64	0.38	0.22	0.15	0.11
	Average	2.59	2.48	2.38	2.21	1.82	1.33	1.00	0.62	0.37	0.22	0.14	0.11
	affinity pure α -O8E poly	2.64	2.54	2.44	2.21	1.83	1.34	1.00	0.63	0.37	0.22	0.15	0.11
	acid peak 739-67B	2.46	2.39	2.40	2.34	2.08	1.73	1.29	0.81	0.49	0.29	0.19	0.13
	Average	2.65	2.66	2.61	2.45	2.14	1.76	1.30	0.82	0.48	0.29	0.19	0.13
	Average	2.56	2.53	2.51	2.39	2.11	1.74	1.30	0.81	0.49	0.29	0.19	0.13

Fig. 24

Anti-O8E mAb Binding to O8E Amino Acids
61-80 Induces Ligand Internalization

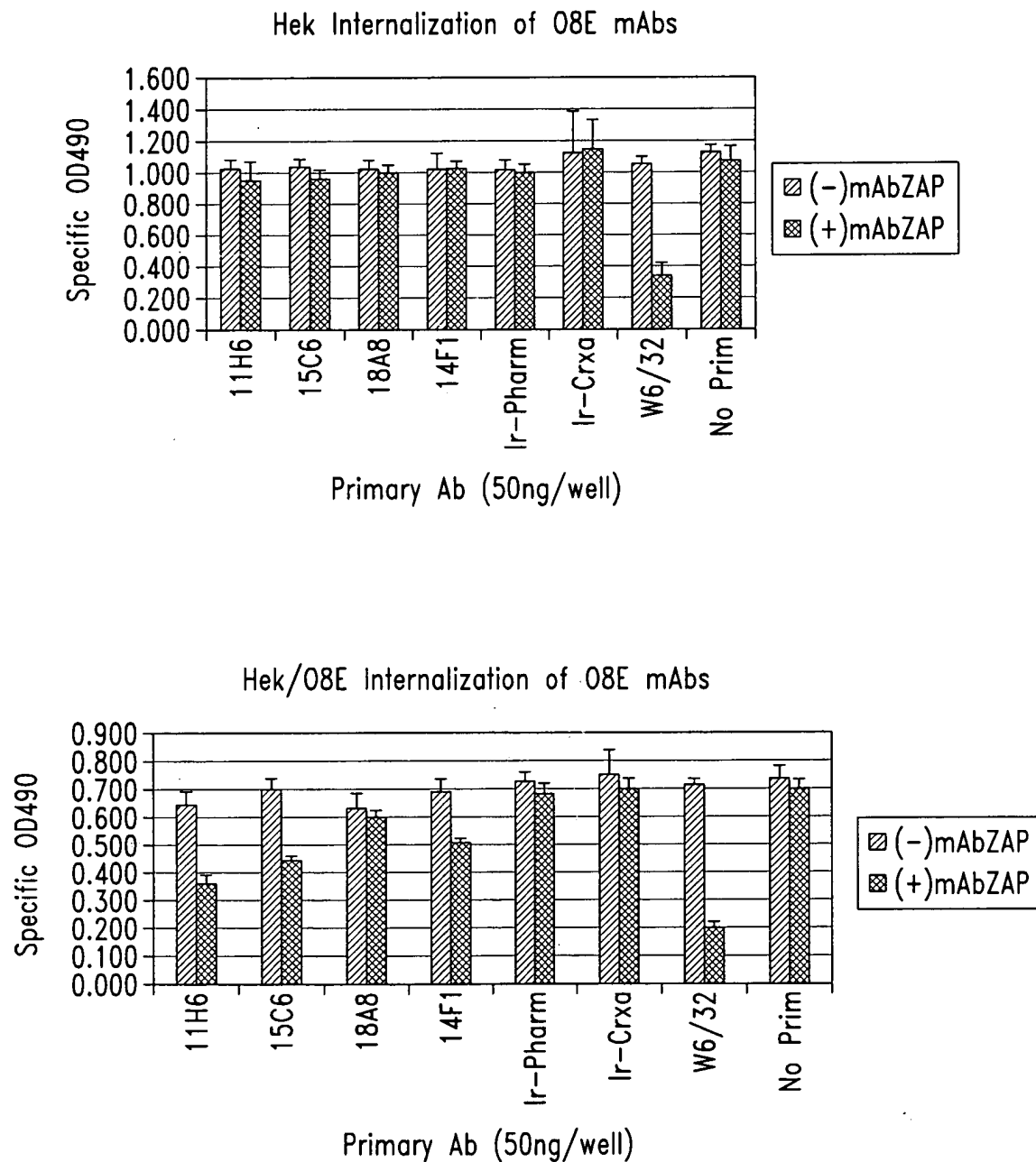


Fig. 25